FOGHORN

THE OFFICIAL MONTHLY PUBLICATION OF THE **F**IRST **O**SBORNE **G**ROUP **FOG**

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The First Osborne Group (FOG) has been formed as a users' group for all persons who use or are interested in portable computers. Membership is available to any interested party whether or not they currently own a computer. The ***FOGHORN*** is published monthly by the First Osborne Group for its members. A subscription providing bulk mail delivery to an address in the U.S. is included with membership in FOG for $24.00 per year. See chart below for the additional postage required for other locations. Address all inquiries to FOG, P. O. Box 3474, Daly City, CA, 94015-0474.

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FOG MEMBERSHIP INFORMATION

Submissions

All articles, letters-to-the-editor, member announcements, classified ads, etc., should be WordStar files, "D" mode (except for program listings), with NO PRINT COMMANDS, and Hyphen-Help OFF. The submissions can be sent on diskette by mail (to FOG, P. O. Box 3474, Daly City, CA, 94015-0474), copied to a FOG diskette at a First FOG of Silicon Valley meeting, delivered (by arrangement) to a FOG officer, or sent by modem to the editor (408-249-5223) or the FOG RCP/M at (415) 755-2030. "By Modem" is by far the most convenient method. If you don't have a modem, get together with a friend who does and send your file. It will be a fun experience. If you send your contribution on disc and specify the disc you would like, we will overwrite your disc with one from the library.

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Commercial Advertising

Commercial advertisements must be submitted as camera ready copy.

Size limitations for advertising are as follows:

full page:7" x 9.5"
half page: 3.5" x 9.5" or 7" x 4.75"
quarter page: 3.5" X 4.75"

Rates, effective with the November, 1984 issue are:

$500/full page, $275/half page, $195/quarter page

For advertisers who wish to run ads in three sequential issues, a special rate is available: Three months at the rate in effect at the time the order is placed and paid in full providing the ads are run in the subsequent three issues. The Board of Trustees will be reviewing the rates monthly and increasing them as the membership grows.

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Submission Deadlines

All material is due two months in advance of the month of publication. (October 1st for the December issue). No exceptions can be made. This change is necessary if the ***FOGHORN*** is to be mailed before the first of the month. Articles which are not month-specific may be submitted at any time. Please, avoid the deadline rush; contribute early.

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Back Issues — Reprints

Reprints of ALL back issues are available. The current cost of back issues is $1.50 per issue to partially cover reprint and mailing costs. Non U.S. members should include funds for AIRMAIL postage. Donations of additional sums will be gratefully accepted.

Not all issues are of value to new members. Vol. 1 No. 1 (October, 1981) was primarily a greeting and a plea for help in getting this group going. Vol. 2 No. 3 (December, 1982) was a 2 page issue with holiday greetings and an advertisement for SuperGraphics. Mailed with this issue was a copy of the original bylaws which have since been modified several times.

There were 11 issues in Vol. 1 since we put out a combined issue for June and July, 1982. For those who are attempting to determine which copies from Vol. 1 are of interest, Vol. 2, No. 2 (November, 1982) has a partial index for Vol. 1. November, 1983 (Vol 3, No. 2) has a partial index for Vol. 2.

Include your account-membership number. Please send the order to FOG, P. O. Box 3474, Daly City, CA, 94015-0474. Orders are shipped once a week. The index to the previous year is published in the November (#2) issue.

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Copies of Library Disks

FOG members may purchase copies of the library disks from the FOG office if copies cannot be obtained through their local group. Individual disks are $5.00 each. Bulk orders or 10 or more disks earn a discount of $1.00 per disk. **NO blank disks** may be sent into the office to have library disks copied onto them.

Shipping and handling charges are $5.00 per order or address. This $5.00 charge must be included with every order. Please be sure to include your account-membership number. Orders without this number will be delayed since no disk orders will be shipped without this number.

For a listing of the programs and files in the library, consult the library column in each issue of Vol. 2 (except No. 3 — December, 1982). The section of the library called - FOG/LIB includes both Jim Woolley's material from the library column and a catalog program which lists the name and disk location of each program (but no descriptions).

In response to the many requests, we have published a typeset guide to the library. This has the descriptions of every disk in the library as well as the guidelines for library use. It is a loose leaf, binder punched volume. This format was selected to facilitate updates. Each copy will be in a portfolio. The price is $5.00 which includes shipping by 3rd Class (surface mail). Update pages will be offered approximately on a quarterly basis.

Affiliated Members Organizations (AMO) may participate in a monthly update service. Only the librarian of an Affiliated Member Organization may make arrangements to participate in this plan. Contact Gale Rhoades c/o FOG, P. O. Box 3474, Daly City, CA, 94015-0474 (phone 415-755-4140) for further details.

New additions will be sent to participants in the monthly update service as soon as copies can be made.

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Rebates to Affiliated Member Organizations

Rebates of 25% of the membership rate ($24.00) will be made to Affiliated Member Organization (AMO) on behalf of eligible members. To be eligible for the rebate, the name of the group MUST be on the membership form (or check) when the yearly dues (new or renewal) are paid.

No rebates will be made until the Affiliated Member Organization is formally approved by the Board of Trustees.

Application for Affiliated Member Organization status must be made in writing and must be accompanied by a list of the officers — names and FOG membership number — and a signed copy of the group bylaws. For further details, request an AMO information packet.

It is not necessary that a group be affiliated when the member pays the yearly dues and specifies affiliation for that member to be eligible for the rebate.

Rebates will be paid within two weeks of the Board meeting at which the group receives its charter. Subsequent payments will be made on a quarterly basis. Refer all questions about rebates to FOG, P. O. Box 3474, Daly City, CA, 94015.

The Board of Trustees has approved a minor change in the rebate policy for groups who are Affiliate Member Organizations. If the AMO has a checking account, the treasurer may collect membership dues for renewing or new members and forward only $18.00 (plus appropriate postal surcharges) to FOG. This allows the group to have immediate access to the rebate funds. Please note that the two requirements for this change will be strictly enforced. ***No personal checks will be accepted.***

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Change of Address

To request a change of address, send the label from a recent ***FOGHORN*** together with the new address either in an envelope marked "CHANGE OF ADDRESS" or on a Postal Change of Address Card to FOG, P. O. Box 3474, Daly City, CA, 94015-0474. Please allow at least 30 days for a change of address to be effective.

You should also request that the post office forward any issues that arrive before your address change is posted. You must tell the post office that you will pay forwarding charges since bulk mail is NOT automatically forwarded.

FOG cannot be responsible for additional postage charged because a member delays sending in a change of address.

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Additional Postage Charges

Your membership in FOG ($24.00) covers delivery by Non-profit bulk mail. This rate is only available to members who have bulk mail delivered by the U. S. Postal Service. For those who either cannot receive U.S. bulk mail or prefer first class delivery, please add the appropriate amount (from the chart below) to your payment.

The following is a list of additional charges which must be included with new or renewal memberships effective 9/1/83:

Canada & Mexico (First Class)	ADD...$ 6.00
Members with U.S. addresses who prefer First Class delivery to Non-profit bulk mail	ADD...$ 6.00
Central & South America, Caribbean, & Europe (Airmail First Class delivery)	ADD...$12.00
Asia, Africa, & Far East (Airmail First Class)	ADD...$15.00
Out of North America preferring surface mail — delivery not guaranteed	ADD...$ 6.00

If you want the new rates to take effect for your current membership, you may prorate the above charges for the remaining term of your membership. For each month remaining, send 1/12th of the above rates.

For those with U.S. addresses who elect to continue receiving their ***FOGHORN*** by Non-profit bulk mail, we have some suggestions for improving delivery. The post office guidelines say that bulk mail can only be traced by the recipient but that delivery in the San Francisco Bay Area should take about seven working days and to the East Coast about 15 working days. We are now taking the bulk mail to the post office before the first of each month. If you are not getting timely delivery of the ***FOGHORN*** you should contact your local postmaster. If he is unable to improve the situation, there is a complaint form at each post office. We have been assured that all complaints are pursued promptly.

We are now paying return postage for all undeliverable copies of the ***FOGHORN***. This allows us to better identify problems. FOG will be responsible for costs incurred remailing a ***FOGHORN*** only if the member has provided us with the correct address in a timely manner. If we can be of assistance, do not hesitate to drop us a note listing all of the specifics.

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Please help

It is essential that you include your account-membership number in all correspondence. ***Omitting your membership number will needlessly delay shipment of your order.*** It is **not** necessary to write a separate check for each different order. Consolidating your requests and sending only one check will save the staff considerable time.

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FROM THE FOG

Some Good News & Some Bad News!

by Frank Morton

The good news that I have to report is about our Okidata emark 2350 Printer. It's brand new and yet we have had it almost a year now. It has a prolific output with its 350 cps eed. We got it for the FOG office in May 83 and it caused an ediate improvement in the throughput of printing. It was a e on the noisy side, but that was a small price to pay for the e saved.

Everything went well until Jan '84 when the print head gave When the head was replaced an upgrade kit was also inled in the Pacemark. In keeping with Murphy's Law the ter naturally broke down when we needed it most for ***HORN*** use, preparation of information for a Board Meeting, We were given a much needed loaner to see us through repairs (in this case about $600 worth).

Since then it has been necessary to have the print head reced two or three more times. So how does this fall under catagory "good news"? Each time we needed a print head acement we got a loaner to use. Finally in May 84 they reced the entire machine with a brand new printer! Even e remarkably all of the above was done under Warranty no additional charge to FOG! Needless to say we are very ressed with Warranty service from Okidata!

The new Pacemark is busy pumping out piles of printing. an added pleasure — it is even quiter than the original. So you see why I call this good news.

t may be old news by the time you see this in print, but our CompuPro 10 recently donated by CompuPro Division of bout is also hard at work in the office. I stopped by the of- to check it out and it is really great! Gale was printing out ard copy of the entire membership roster for backup and rence. She was doing dBASE II command file modificans on one terminal while I was poking around the hard disk NSWEEP on another terminal. There was instantaneous ponse at all terminals and the staccato of the Pacemark er wavered! Gale says it is like that even when all four terals are in use.

The Wyse Terminals we bought from Mentzer Computer tems in Burlingame are very nice. They have a large glare- green screen and a small footprint with a detachable keyrd. These terminals emulate Televidio, Hazeltine, and e other conventions that I don't remember. The system ks well and should be a potent tool for providing service help to you, the FOG members. We certainly appreciate e than ever the gift of the CompuPro 10 arranged by Bill lbout and the donation of support services from Ed tzer.

The BAD NEWS that I have for you involves another well known product; dBASE from Ashton-Tate. In case you may have missed the advertising they have a new product out called (as you might well expect) dBASE III. It will handle over a billion records per file, limited only by the computer system (with dBASE II a file is limited to no more than 65,535 records). It will allow you to have up to ten files open at once (as opposed to two files at once in dBASE II). In dBASE III information in one of two related files can be accessed based upon data in the other. It will handle procedures, parameter passing and automatic variables. Up to 32 procedures can be included in a single file.

The new dBASE III should be easier than ever to use, because a new tutorial/manual and a useful HELP program is included. It will be a lot faster than dBASE II because there is no need to spend a lot of time opening and closing files. What is more there is a greatly enhanced sorting capability as well.

The reason that I list this big leap forward in data base power as BAD NEWS is because, in their infinite wisdom, Ashton-Tate has designed this new program for the PC-DOS 2.0 operating system ONLY! They have indicated that they have no intention to make it available for CP/M! Since it is designed for a 16 bit operating system this may be a moot point to Osborne, Morrow, KayPro, etc. owners. However, the word is that there are no plans to make any similar improvements for dBASE II. Apparently after making their fortune in the CP/M arena they plan to thumb there collective nose at all of us who have no desire to jump on the IBM bandwagon. So unless you plan to get an Osborne PC or similar Morrow, etc., when they become available, you can forget dBASE III! ..... OR you could write to Ashton-Tate at 10150 West Jefferson Boulevard, in Culver City, CA 90230 and let them know how you feel about their plans.

On another subject (mostly good news), many of you may have received a mailing from a group called SPITE. The introduction to the mailing started out "Dear Long Suffering Osborne Owner," (I didn't realize I had been suffering all that much). What is good is that it is a combined mailing from many outfits with good products that we know well. We at FOG can recommend the group as most of them are ***FOGHORN*** advertisers who have done a great job of supporting FOG members. The list includes such long time friends as Computing!, D/G Systems, Drive C:, Nuevo Electronics, Ruff Software, Sudden! Products Group, and SGW Enterprises. Both the Sudden! Products literature and the general mailing from SPRITE included specific plugs for joining FOG. Naturally we greatly appreciate their support.

If you happened to miss out on the mailing SPITE can be reached at 13531 SE Foster Place, Portland, Oregon 97236. They have a toll free odering number for VISA/Master Card owners at 1-800-824-7888 (Operator 311). From Alaska/Hawaii call 1-800-824-7919 (Operator 311). They indicate a willingness to handle technical questions at the above address or phone 1-503-224-0137 during business hours.

⇨

We must admit that we were a little amazed at Sudden! Products offering a 16 disk pack of Public Domain software at $99, and SGW Enterprises offering Public Domain software at $12 per disk or $50 for five. They indicate that the software is free and the charge is for "shipping, handling, media, software selection/review, and copying costs." Obviously with a little effort on your part the same software is available for copying at your local FOG organization for no more cost than your cost of the diskette media. So get out there and spread the word about FOG to those Osborne, Morrow, KayPro, etc. owners who have not yet heard about the benefits of belonging to FOG!

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FOG FONES

FOG office, voice line	(415) 755-4140
FOG RCP/M #1 (300 & 1200 baud)	(415) 755-2030
FOG RCP/M #2 (300 & 1200 baud)	(604) 596-0314
FOG RCP/M #3 (300 & 1200 baud)	(415) 992-8542
FOG RCP/M #4 (300 & 1200 baud)	(415) 591-6259
FOG RCP/M #5 (300 & 1200 baud)	(415) 424-1482
FOGHORN Editor, voice line	(408) 249-5223

ADVERTISEMENT ADVERTISEMENT

HELP US CELEBRATE!!!

TO SHOW OUR APPRECIATION OF YOUR SUPPORT, WE ARE PLEASED TO OFFER:

THE OSBORNE EXECUTIVE — *LIMITED EDITION*

Introducing a special offer — the Osborne Executive **Limited Edition.** If you ever thought about purchasing a computer, now is the time to act. From now until Sept. 15, 1984, we are offering the Limited Edition, a new, improved Osborne Executive, personalized expressly for you. In place of the normal Executive nameplate, we will engrave a high-quality silver nameplate with your name on it. What's more, we will encode your name into the ROM of the system, so that when the Limited Edition is turned on, your name will be prominently displayed on the screen. Not many companies would do so much to personalize a system, but everybody knows that Osborne has always been a one-of-a-kind company.

The Executive is the perfect tool for the person who needs to type documents of any sort or to work with numbers on a spreadsheet. It gets the job done, fast and efficiently, for a fantastically low price.

ADDED BENEFIT. Because your name is burned into the system ROM, your computer is unique. No one can turn your system on without seeing your name appear on the screen. That includes any would-be computer thieves. Operation Identification would be proud.

SYSTEM SPECIFICATIONS

The Osborne Executive has a 7-inch amber display with brightness and contrast controls, two disk drives (200K bytes each), a typewriter-style keyboard with a 12-key numeric keypad, parallel and serial input/output ports to hook up any type of printer you want, a set of documentation that is some of the best in the industry, and all the software you need. The software includes WordStar® (the top-selling word processing package), SuperCalc® (electronic spreadsheet package), CBASIC® and MBASIC® (two popular programming languages), and the Personal Pearl® Database system. **All this for only $1445.00!**

THE NEW, IMPROVED OSBORNE EXECUTIVE

The personalized, Limited Edition Executive is nice, but what's behind the nameplate? The new OCC has made some important improvements in the Osborne Executive computer. Here are some of the enhancements we've made:

Enhanced BIOS. The BIOS is the Basic Input/Output System, or the gut level of the operating system. We've enhanced it to make it faster and easier to operate with nearly every type of printer. Every Limited Edition Executive comes with the Enhanced BIOS.

ROM VERSION 1.21. Every new Executive includes a new version of the ROM. (The ROM is the part of the computer that logically connects the hardware to the BIOS.) The ROM has been improved to run some of the new hot selling high-level programming languages, like the low-priced Turbo Pascal from Borland International.

Quiet Fan. The fan on the new Executive runs smoother and quieter — smoother to eliminate interference to the screen, and quieter so that the Executive is physically less tiring to use.

Xerox Warranty. Every Executive sold directly to you includes a 90-day warranty from Xerox. Should your trusty Ozzie break down, you can take it to any of the 91 Xerox repair centers across the country.

Executive Modem. Remember the Osborne 1® COMM PAC modem that fits into the lefthand disk pocket of the computer? We now have one just like that for the Executive. It's called the Executive COMM-PAC and it lets you do everything you could do with the Osborne 1 version, such as connect to the information data bases, services, and bulletin boards across the country. The 300-baud modem has auto-dial and auto-answer capabilities.

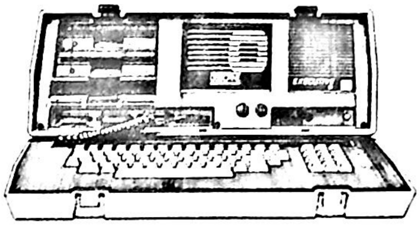
The COMM-PAC comes with the latest version of AMCALL® communications software (retails for $125 by itself), a special 30-day trial offer (with 2 free hours of connect time) from the Dow Jones News/Retrieval Service®, and an offer from Western Union to subscribe to EasyLinkSM. With Dow Jones you can check all your stock quotes, scan and read the day's breaking events in the *Wall Street Journal* (*Journal* stories go on-line at 7:00 AM EST each weekday), or find out what happened on the last Wall Street Week TV show — complete transcripts are available on Dow Jones. With Easylink you can send telexes or mailgrams right from your fingertips. Sound good? How about this: if you buy a COMM-PAC with your Executive, then the price is a mere $100, $50 off the normal price.

Executive Technical Manual. Want to know everything about the Executive computer? Here's the book for you. The Executive Technical manual contains everything about the system from the sensuous system schematics, action packed BIOS listing, the revealing secrets behind the theory of operations, to the naked pinouts of connectors. It's over 900 pages and comes in five fun-filled volumes. It can be yours for $125.

Executive Universal Terminal Emulation. Got a mainframe nearby that you need to talk to? The EXETERM, Distributed by JMM Enterprises, lets you emulate many different terminal types. Now, your Executive is not only a nifty, portable computer, but can act as a terminal to connect to a mainframe computer. EXETERM sells for $250.

ADVERTISEMENT

Help Us Celebrate!!!



The Osborne Executive "Limited Edition" includes the following:

- 128K, Z80A microcomputer
- CP/M Plus™, WordStar®, SuperCalc™, MBASIC™, CBASIC™, Personal Pearl®, UCSD Pascal
- 90-day Xerox Americare Warranty
- A smoother, quieter fan
- The enhanced BIOS
- 1.21 Version of the ROM

PLUS:

- Personalized sign-on message when you power up the system.
- Personalized, silver name plate

LIMITED EDITION
your name

ALL FOR
$1445.00

Order now! Offer good until Sept. 15, 1984. Subject to availability.

		Qty	Total Price
Osborne Executive "Limited Edition"	$1445. ea		
Osborne Executive COMMPAC Modem	$100. ea *		
Osborne Executive Technical Manual	$125. ea		
	Handling Charge		10,00
	California residents add 6.5% sales tax		
	Total Amount to be sent with order:		$

Two to three week delivery to allow for personalization.

Name __________
Shipping Address __________
City, State, Zip __________

☐ Cashier's check
☐ mastercard
☐ VISA
Credit card # __________
Expiration Date __________

Please print name to be engraved very clearly. Osborne is not responsible for misspellings.

* When purchased WITH the Executive. Modem is $150 when purchased separately.

Signature

All orders can be paid by cashier's check, Mastercard and VISA.
Sorry, no personal checks or COD's can be accepted.
All orders will be shipped UPS, freight collect.
We encourage you to order through your local Osborne dealer and save on shipping charges.

SEND ALL ORDERS TO:

Osborne Computer Corp.
26538 Danti Court
Hayward, CA 94545
Attn. Customer Service/Dept. 5000

Offer only good in the United States

WordStar is a registered trademark of MicroPro, Intl. Personal Pearl is a registered trademark of Relational Software. CP/M Plus and CBASIC are trademarks of Digital Research, Inc. SuperCalc is a trademark of Sorcim Corp. MBASIC is a trademark of Microsoft

Service for Ozzies

by Gale Rhoades

We have been getting so many calls from all over the country (and even a few from out of the country!) from members who are seeking someplace to get a sick Ozzy fixed or upgrades installed that it was decided that we needed to get a list into the **FOGHORN**. As many of you know, most Xerox AmeriCare centers provide Osborne warranty service as well as regular servicing for Osbornes.

But with only 91 AmeriCare centers and some members very unhappy with some of the service they have received from these centers, members have been seeking alternatives. While this list is by no means complete and while no attempt has been made to check out the quality of service these dealers can supply, we hope that the list below will at least provide a starting place.

This list comes to us courtesy of Mission Peak Systems. The dealers with a ** after the name are those who provide Mission Peak warranty service in addition to their normal servicing. All of these dealers obtain their parts from Mission Peak.

If members know of additional service centers (or individuals who can service systems) please let us know. We have set up a data base for this information and will probably publish periodic updates.

The dealers in this list are in zip code order, lowest zip code first. This is not always an indication of what service center is nearest to you but should at least give everyone a starting place.

HARVEST COMPUTER, INC.
118 MAGAZINE STREET
CAMBRIDGE, MA 02139
(617) 547-3289

THE BIT BUCKET **
1294 WASHINGTON STREET
WEST NEWTON, MA 02165

DOVER ELECTRONICS **
157 PORTLAND AVENUE, RT 4
DOVER, NH 03820

HIGGINS **
777 BROADWAY
SOUTH PORTLAND, ME 04106
(207) 767-3281

UNITED PERSON COMPUTER CORP. **
135 NORTHPLAINS INDUSTRIAL RD.
WALLINGFORD, CT 06492

RAINBOW COMPUTER, INC. **
141 ORANGE STREET
NEW HAVEN, CT 06510
(203) 777-2001

WESTWOOD COMPUTER CORP. **
155 ROUTE 22 EAST
SPRINGFIELD, NJ 07081

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LETTERS

Dear *FOGHORN*,

Compliments to all of you on the fine quality of the *FOGHORN*. As a new member(1984), I have just read the back issues and the improvement in both contributions, print quality and layout over the years has been evident.

IMBEDDED PRINT CODES IN SUPERCALC SPREADSHEETS

There are at least two ways to go about embedding printer control codes in SuperCalc spreadsheets.

Hackers Method

At the location where change in printer setting is desired place text (i.e.''\\\\") or a textual constant (i.e.("\\   \   \")) containing the same number of characters as the printer control string. Save the spreadsheet. Using DDT or DDTF, load the spreadsheet (remember to use CAL extension in filename). Find the saved dummy text or textual constant(DDTF helps locate this). Set these hex values to the desired printer codes, exit DDT and save. Load SuperCalc. Examination should show graphic characters, numerals, letters and underlined characters depending on the hex values stored (underlines are for values above 80h 128d). Column justification seems to work best if print codes are on a seperate line. Also remember if using multiple entries in one print string(i.e. dot graphics) to set column width to exact number of characters, since any spaces will generate a 20h.

Supercalc Spreadsheet User Method (for MX-100)

Insert a blank line where you want to change printer instructions. Do a partial load from ASCIIPNT spreadsheet (submitted for library at same time as this letter) column 1 row according to col.F description of desired print code (i.e. /LASCIIPNTPA30<esc> ↵ where cursor is on location for print code in your spreadsheet.[?]

Limitations

SuperCalc uses 00h null as the marker to end each entry thus it can't contain 00h as a character value. (Use <esc>@ to turn off double width on Epson etc.) "34h" also gives trouble when used as a character value.

SCREENSHRINK WITH DISK READS/BAD POWER SUPPLY

About one month after installing the CTS-Osborne modem in the left diskette pocket on my 01 (purchased as DD), the screen showed about 1/4" to 3/8" display srinkage during disk reads soon after power up. This occured on Christmas Eve in our retail store environment, thus I didn't have time to check it closely. After Christmas 01 wouldn't beep, display or run disks. We found the + 12 volt supply was [pulled] down to about +2 volts and +5 to about +1 when connected to the main CPU board. When disconnected the voltages appeared normal. After an unsuccessful ship-in to service (120 mi. away) we found that after 30-45 minutes of warm up time the screen began to fill with random characters (faintly), beeper began to sound, and disk drives ran freely. After several more minutes turning the power switch off and back on would put the 01 in a "normal" turn on state. Using one end cut from a regular RS232 serial port female connector to fit the battery connector,we powered up using external +5 and +12 supplies (adjusted +5 under load to stop disk drive free run condition). The Zerox service center (120 mi. away, also) had on hand a power supply board for about $100 and this solved the problem.

The Moral of the Story

Keep modem in diskette pocket only when in use (Heat is the enemy). Use exteral supply if needed as substitute. Look for a fan to fit your style of use.

DOUG HURST VS. OSMOSIS AND REPLIES

Since I waited to buy the DD complete this issue is largely academic to me unless I wanted to buy other Osmosis products. Doug has contributed regularly. I like to see various viewpoints on hardware or software prior to purchase and he has at least sparked debate.

DAVE GOODFELLOW

Dave says he writes for a living and doesn't contribute to ***FOGHORN***. Many ***FOGHORN*** regulars (J. Gaudio, B.S. Absom etc.) consult. Think of the ***FOGHORN*** as a barter economy of ideas.

FUNCTION KEY LABELS

Try printing out your special function key labels and taping to a 3/4" diamater CPVC hot water rigid plastic pipe about 10" long. It just fits the keyboard cable storage groove above the number keys. Mutiple sets of key definitions can be used by rotating the pipe.

FAN FOR 01

We have just started using a Galaxy 3140 personal fan on the top vent of our blue case DD 01. It is about the diameter of a diskette and 3 inches thick. A little bulky for very portable use unless you remove it from the original case, but light and easy to sit on top when in place. We have noted no serious interference with the monitor. Sells for about $9.99 at many True Value Hardware stores and others.

DISPLAY ON SCREEN OF FORMATTED W/S DOCUMENT FILES

At CPM prompt with utility diskette in logged drive, use PIP CON:=filename.typ[Z]. This will display file on screen in proper format with out increased disk space for a temporary file.

Bob Moseley
Greenfield, TN

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Moving From the 01 to the MD3, and From WordStar 2.26 to 3.0 to NEWWORD

There is simply too damn much change in my business life these days. First the new Morrow MD3 ($1999, including WS 3.0, LogiCalc, Bazic, Pilot, Personal Pearl, and Quest, a bookkeeping program that cost $37.50 to register and unlock. INCLUDING ALSO THE LETTER-QUALITY MP100 PRINTER..A SILVER-REED 500).

You know I'm either cheap or smart, because I bought Osborne's 01 (serial #1100 — and would never ever call it Ozzie!).

I bought the MD3 because it was the most logical, natural migration from the 01 to an office system (and more storage; I remain one of the few mavericks who never upgraded to double density.)

THE MORROW MD3

My system has the Liberty Freedom terminal, which is fine for my writing needs. But the keyboard epitomizes the difference between Morrow's philosophy and Osborne's: If it's OK but could be terrific, don't try to make it terrific.

The keyboard is OK. All the letters and numbers work. It does have a bunch of function keys, but they don't do anything; or if they do, the documentation doesn't tell you anything. When I asked Keith Van Zile at Nycom, he suggested I get Smartkey, so that I could program the WordStar functions into the function keys. Another 50 bucks. No Setup program. Shucks.

The system works fine. After very little hassle (two calls, two misstarts) I got the printer set up. It works exactly like an NEC Spinwriter I used last year, except of course it's slower. But it is logic seeking, does bidirectional printing, and ticks away faster than the Olympia output on my 01 at home. It also does super- and sub-scripts neatly.

TIP: Do you need a superscript often, like $^{®}$. I've created files for $^{®}$, $^{\odot}$, $^{©}$, the Angstrom symbol, and the Ohm symbol and then ^KR them when I need that particular gadget. Easy sneezy.

MOVING TO THE MD3

The Morrow machines have programs to set the disk format to IBM, Osborne, Xerox and Morrow formats. It was really simple to set my B drive to the Osborne format and copy my thirty disks onto about six Morrow disks.

Surprise: Although the MD3 is DSDD (double sided, double density), it ignored whatever disks I gave it and formatted them all (mostly single-sided, single-density) with no trouble.

No surprise: Within two weeks, all the MD3 disks were almost full. Pease's Law of Disk Space says that 400 Kbytes of space will be filled just as quickly as 90 K. It's so easy to get CP/M, WS, WSF (a patched fast WS), WASH, XDIR, MODEM712 and your other favorites on the same disk, why the hell not?

I must develop some discipline soon. NO MAILMERGE!

The ghastly discovery that the bundled WordStar had no Mailmerge almost killed me. It certainly wasted about a week of my time. I priced out Mailmerge.

⇨

NEWWORD

Being an ad writer and a sucker for a well-written ad, I read every word of the Newword ad in InfoWorld and immediately bought it for $100 with the trade-in of my WS 3.0 that was bundled with the MD3. It is a WS lookalike, using all the commands I'm already familiar with. And it includes Mailmerge.

I've been using it for a month, now, and like some of its features (like install, which lets you change any default settings right from a mix-and-match menu at any time) and hate some others (you can't print with a KP; you have to KD, then P. But, of course, it then lets you hit ESC to print the document you've just been working on...most of the time...)

If anyone's interested, I might do a more complete review, but it is so close to WS, you can sit down with their little prompt card (Available from Rocky Mountain Software...see the ad in Feb's ***FOGHORN***) and see the similarities and differences for yourself.

LOGICALC VS SUPERCALC2

There is no comparison. Supercalc2 is absolutely wonderful. LogiCalc, which is bundled with the MD3, is ok, but very clumsy on input; you can't do the global and range entries that SC2 lets you do. It does have a neat program for outputting onto continuous paper, though (and I bought the tractor with my MP 100 printer). You just tell the program you're using continuous paper and how wide it is, and LogiCalc figures out how to split your spreadsheet onto two or three pages so that you can cut and paste easily.

BIG THANKS TO LOTS OF *FOGHORN* ERS

About six months ago I asked if anyone knew how I could sort my editor lists alphabetically. I got calls from all over the country and letters from all over the world. If I find time, I will put all this wisdom into an article for the ***FOGHORN***. Meanwhile, I suspect I could use SC2 to do this for me. If you've used SC2 to sort text files, please give me a call at 415-322-2072. Could be a very useful application; might make me actually buy SC2 (or SC3) for the Morrow if and when it's available.

Paul Pease
Palo Alto, CA

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Qume Sprint-3

Until somebody better informed comes along, I will volunteer to be the "HELP" contact for Qume Sprint-3 printers. These machines, while obsolete, appear to be solidly made, and can sometimes be found in fleamarkets. Osborne owners are likely to assume that extra electronics must be needed to drive these, since they have a 50 pin parallel connector. The .ASM, .COM, and .DOC files included on this disk tell how to get around the problem. They should probably be bundled as QUME30S.LBR and put on a RCPM, and/or made a library disk, if you think there is likely demand.

Rodney N. Myrvaagnes
NYC, NY

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Anderson-Jacobsen < — > WordStar

I have an Osborne 1 (DD), WordStar ver. 2.26 (soon to have 3.3) and my printer/terminal is an Anderson-Jacobsen 831 (an 832 rebuild). I can't get the micro-justification; only big gaps between words. [Is there] anyone, in FOG, experienced in WordStar patches for the A-J? Also, anyone out there have a copy of "Customization Notes"? MicroPro tells me it's out of print and that "no copies are available." Any suggestions?

Stephen Carrig
Arlington, VA

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Patch WS 3.3 and CP/M3 [Executive] info.

Each issue of ***FOGHORN*** contains queries about patching WordStar 3.3 as well as some answers. I do hope the files on the latest library disk contain fuller answers, but will provide some of my own here.

The WordStar 'patcher' known in release 2.x still exists; it has been hidden and may be accessed by typing "+" at the main Winstall menu. The patch labels are the same as they were in 2.x. Actually all of them are listed in the WS.INS file on the Install disk. Each label is followed by the its location in byte-reversed format familiar to assembly language programmers.

I have recovered the list and sorted it. Under the name PATCHWS.DOC, on a disk submitted to the FOG Library, are two lists; one in alphabetical order and one in numerical order. I have added a brief comment for each label I have been able to find documented in the 2.x installation manual. Apparently, the Customization Notes refers mainly to serial daisy wheel installations as the installation manuals seem to cover everything else, at least in summary form.

WordStar can be speeded up by a number of patches. The first four can be done with the Winstall patcher. Set :DEL4 to zero, :DEL1, :DEL2, and :DEL3 to a value between 1 and 3 (I understand they can be set to 0, but 2 seems fast enough for me). The last two patches cannot be done with the patcher; SID [or DDT[must be used. Zero out locations 3F1Dh and 411Fh to eliminate the logo and legal notice. For those who do not need menus and help screens, WordStar can be made smaller by omitting the WSMSGS.OVR file. WordStar is quite happy without this file - although it cannot offer menus and help.

On a disk used for simple program editing on which you try to fit WordStar, a compiler, assembler, linker and some library files, the extra space is worth the absence of help.

CPM3 is most thoroughly documented in the Digital Research manuals. If you have read a few works on CPM 2.2 (like Cortesi's) you will find the new DRI manuals useful and readable. They cost $40 [*My recent call obtained the information that the price has been raised to $50. — Gale Rhoades*] from DRI and you must send them your CPM3 serial number with your order.

Gordon Wilk
Los Angeles, CA

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Help!

I have a question on the article by Gary Burleson [*Booting the EXECUTIVE Faster and Autoloading with EXECST.COM*], page 42 in the June 1984 issue. Everything worked as promised but then I had to go beyond the article and that is where the trouble started. I wanted to make PEARLPR [*part of the Personal Pearl program*] file self-loading (I find that in order to get the PEARLED to print out a record using less than the full 11 inch page for each, I have to print a sample using PEARLPR first and then go to PEARLED.) Following Gary's sample I got this to work too. But then I remembered that I print out in condensed print and that I have to send the printer code to the printer before going into PEARLPR. So this is what I did:
I went into Sid and typed:

```
S255 ⮐  (I had already made the changes to take the 0 off the
         screen.)
05 ⮐    no of characters + 1
10 ⮐    ^P send to printer
1B ⮐    Escape printer code
50 ⮐    P printer code
10 ⮐    ^P stop sending to printer
00 ⮐    BDOS call
08 ⮐    no. characters + 1
50 ⮐    P
45 ⮐    E
41 ⮐    A
52 ⮐    R
4C ⮐    L
50 ⮐    P
52 ⮐    R
00 ⮐    BIOS call
. ⮐
G0 ⮐
B:EXECST.COM ⮐
Y ⮐
100 ⮐
0B00 ⮐
```

When I booted the disk everything worked allright through the BIOS display then I got:

```
P?
A>
```

The printer did not react at all so it did not get its print code. And the Personal Pearl program did not load.

I realize that it is probabably something that I don't understand about what I am doing, some one enlighten me!

Has anyone used a daisy wheel to cut mimeograph stencils with good results? We tried a Brother HR-1 but it didn't cut well.

Russell Reed
Pleasant Hill, OR

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Recovering lost space in dBASE II

This is just another letter about how to recover lost or unused space in dBASE. I am using the BLOCK TRANSFER portion of WordStar. I call up the command file in non-document mode, at the beginning of the file type ^KB, then go to the end of the command file plus one more line and type ^KK. At this point the screen should dim showing your command file in half-intensity. (At least my screen does.) Type ^KW and name the new file when asked for by WordStar. Type ^KQ and N, then the file name you used above to review the new file and check its contents for what you want transferred. If all checks OK delete the old file and rename the new to the old. Since I'm a non-internal-computer-addict, this seems to work fairly well.

Also, to shorten data files I use dBASE to create a new file by USEing the <old-file name> and typing the COPY STRU command. Then USEing the <new-file name> I APPEND FROM <old-file>. After checking for correct file transfer I DELEte the <old-file> and REName the <new-file> to the <old-file> name. If the file was INDEXed before this, it will have to be re-INDEXed.

Thomas H. Clark
Gallup, New Mexico

* * * * * * *

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Osborne Service

If any FOG members are concerned about finding good repair service for their Osbornes, they will be interested in this story about one quality person in a sea of snakes, flakes, and con artists.

Back when the original Osborne Computer Corporation was operational, I had Computerland of Baton Rouge, La. send my tan case 01 to the factory for double density and 80 column upgrade. It seemed like longer than forever before I got the machine back.

My 01 worked fairly well for a month or two then quickly developed an intermittant problem with the 80 column upgrade. About this time, OCC failed and I was left with a machine I could barely use. I took it back to Computerland — they let it sit around for a week or so before finally telling me that the 80 column board was "bad" and they couldn't fix it because they "didn't have the necessary parts".

I suggested that that they get another 80 column board from Xerox — they did, charged me over $360.00 for repairs, and then were snotty when I asked them for the "defective" board as I picked up my machine.

Thirty minutes of use confirmed that the 80 column board change hadn't helped and my unit was worse than ever. I gave up trying to deal with Computerland.

Not wishing to throw away all the knowledge I had accumulated concerning Osbornes, I decided to purchase another unit from Micro Business Systems of Shreveport, La. They sold me a new blue case machine with double density at a cost of $1,000.00 and the salesman assured me that he would carefully check the machine before he shipped it to me.

We both agreed that, since Osborne was bankrupt and I was buying the new machine at a discount, there would be no warranty. I'm now convinced the salesman deliberately sold me a defective machine his firm had been unable to fix. The new 01 arrived with a drive that didn't work correctly.

Having been unlucky enough to deal only with snakes, flakes, and con artists throughout my brief experience with microcomputers, I was totally discouraged. I had two nearly unusable Osbornes and no idea where to turn for competent repair service.

In desperation, I sent out 20 letters to points all over the U.S. asking for the name of the best Osborne repair man in the world. I didn't care where he was and I didn't care what he charged. I just wanted my Osbornes fixed so that I could them get back to work!

Out of 8 replies to my inquiries, the name "Joel Guerra" came up twice. When I asked the president of the FOG group in Dallas about Joel, I was told that he was absolutely honest and almost too conscientious. Joel was described to me as a person who cared about his work and took pride in what he did. I learned that he was fascinated by the Osborne product, wrote software for it, and was in the process of writing a book about the machine.

I called Joel, discussed my Osborne problems with him, liked the way he talked, and shipped my newest unit to him the next day.

He quickly found a defective wiring connector on one of the drives, patched it up, and had my blue machine back to me in a hurry. Joel carefully told me what he had done to repair the unit and explained that the "fix" was marginal. Sure enough, the repair didn't hold and I had to send the unit back to him. This time, Joel changed the entire drive, readjusted everything, sent the unit back to me, and it went to work without further problems. At this point, I was so happy with his service that I sent my tan machine to Joel in hopes that he could straighten it out. There were so many problems with the tan Osborne that Joel became embarassed because he was taking so long to fix it. He shipped it back to me — it didn't work — I shipped it back to him. He found more problems — shipped it back to me — it didn't work — I shipped it back again.

Throughout all the shipping back and forth, Joel never lost his patience. He just tried harder — all the time apologizing for taking so much time to get the job done. I felt he really was doing his best — and I figured he would eventually get everything running correctly for me.

Sure enough, my tan unit finally came home with no more bugs -- working better than ever and sporting a new amber filter over the screen. Joel also sent along some free utilities that included a program for checking the speed of my drives, another program that gave me a blinking cursor, and still another program that gave me the capability of quickly printing what was appearing on the screen.

By this time, I had paid Joel approximately $160.00 and both machines were in top shape. I still had my "defective" 80 column board that Joel had already determined was good. I sent my blue machine back to have him install the 80 column board and readjust the drives so that the speeds would exactly match those on the tan Osborne. (By running the disc speed checker program Joel had sent to me, I could tell him what I wanted.)

I now have both machines back — they are running perfectly, the dreaded BDOS errors are gone, and I have nothing but praise for Joel. He has more than lived up to what others have said about him. He has never done anything to cause me to lose confidence in him and has been extraordinarily honest with me at all times.

If FOG members are looking for someone they can trust who isn't a snake, a flake, or a con artist, I suggest they call for Joel Guerra at 214/659-0503. Or they may write him at:

Software Access
2642 N. Beltline Rd.
Irving, Texas, 75062.

By the way, I have never laid eyes on Joel. All of our dealings have been handled over the phone. As long as Joel Guerra will do the repair work, I'll never let anyone else touch my Osbornes.

Gerald B. King
Alexandria, LA

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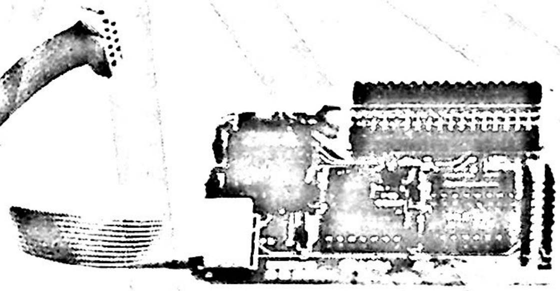

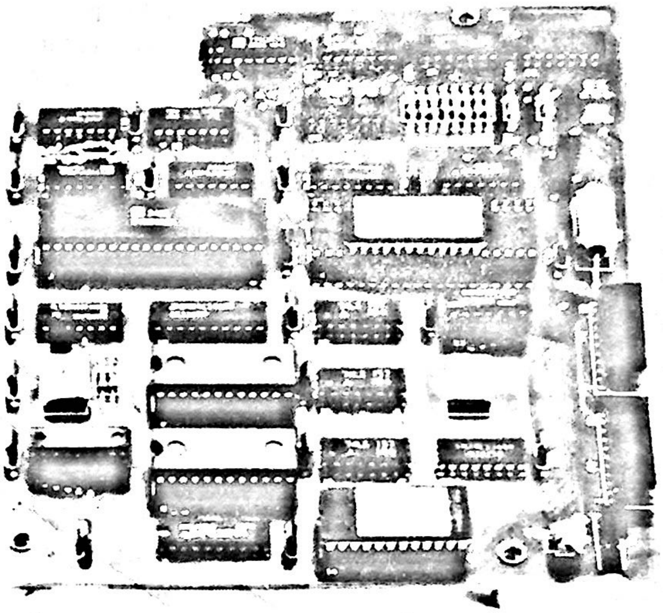

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Executive Info.

I have discovered two answers to problems with the Osborne Executive computer. The first concerns the use of the UMPIRE.COM program on disk -FOG/EX1.002. If SID is used to change the byte at 0100H from 43H to 00H, this changes the program so that it does not disable interrupts, thereby permitting the ^C, ^K and ^S commands to be used.

The second problem relates to the difficulty of getting directory-type programs to properly display the amount of free space left on a disk. While the Osborne 1 uses the CP/M 2.2 operating system, the Osborne Executive uses CP/M Plus which is also known as CP/M 3.0. This causes some problems because CP/M Plus is not completely compatible with CP/M 2.2. One problem is that XDIR, SUPERDIR and other directory programs written for CP/M 2.2 do not print out the correct amount of space available on a disk, as Jim Switz has mentioned.

Digital Research (DR) at P O Box 579, Pacific Grove, CA 93950, has put together for Osborne Executive users a set of five booklets describing various aspects of CP/M Plus and sells it for $40, [*my recent call indicated that DR has raised the price to $50. — Gale Rhoades*], paid in advance. This is for those who want to write and modify assembly language programs. The first booklet is entitled *CP/M Plus User's Guide* and it briefly describes the DEVICE, DIR, DUMP, ERASE, GET, HEXCOM, LIB, LINK, MAC, PATCH, PIP, PUT, RENAME, RMAC, SAVE, SET, SETDEF, SHOW, SID, and SUBMIT commands, much as in the Osborne Executive Reference Guide. The DR booklet also includes a fairly good 29 page explanation of ED.

The second booklet, *CP/M Plus Programmer's Guide*, explains the BDOS system and the 68 BDOS function calls including a get free disk space call, a direct BIOS call and a resident system extension (RSX) call. The RSX facility allows you to intercept BDOS function calls and do various things with them as described in an article by Ron Fowler in the February 1984 issue of ***Microsystems.***

The third booklet, *CP/M Plus System Guide*, explains the BIOS for CP/M Plus and 30 BIOS functions.

The fourth booklet, *Programmer's Utilities Guide For the CP/M Family of Operating Systems*, gives some information about how to write assembly language programs. It describes MAC and RMAC which are the assemblers included in the Executive software package.

The fifth booklet, *Symbolic Instruction Debugger Reference Manual*, explains the use of SID which is furnished with the Executive in place od DDT. This booklet helped me figure out how to use SID. Although the R command is incorrectly described in this booklet, it is correctly described in the Osborne Executive Reference Guide.

The reason that XDIR, and other directory programs written for the Osborne 1, do not work properly on the Executive is described in the second booklet, the CP/M Plus Programmer's Guide. On page 3-41, it says that BDOS function 27, which is the get-allocation-vector-base-address function, cannot be used by a transient program such as XDIR because the allocation vector is in memory bank zero instead of memory bank one. Bank zero is only used by system programs and bank one is used by user programs such as XDIR. XDIR and other Osborne 1 directory programs use BDOS function 27 to get the address of the allocation vector and then count up how many blocks on the disk are free. For the Executive, the BDOS function 46, the get-free-disk-space function, is used to find out how much space is available on the disk. I use the following program to do this.

```
MVI     C.1AH     :THIS IS TO SET THE DMA ADDRESS.
LXI     D.80H
CALL    5
MVI     C.2EH     :THIS IS THE GET-DISK-FREE-SPACE
                  FUNCTION.
LDA     DSKDRV    ·DSKDRV HAS THE NUMBER OF THE DISK
                  DRIVE OF INTEREST. 0=A. 1=B. ETC.
MOV     E.A
CALL    5         :THIS PUTS THE NUMBER OF 128-BYTE
                  SECTORS OF FREE SPACE INTO 80H &
                  81H. THE MAXIMUM SIZE OF THIS IS 3
                  HEX DIGITS.
LHLD    80H       :TO THE NUMBER OF K BYTES. WE HAVE TO
                  DIVIDE BY 8 WHICH IS 3 RIGHT SHIFTS
                  OF THE HL
MVI     B.3       :REGISTER.
LP1:    ORA A     :THIS CLEARS THE CARRY BIT.
MOV     A.H
RAR               :THIS RIGHT SHIFTS THRU THE CARRY
                  BIT.
MOV     H.A
MOV     A.L
RAR
MO      V L.A
DCR     B
JNZ     LP1
LXI     D.SPACE   :THE QUOTIENT IS IN THE A REGISTER
                  AND THE
STAX    D         :MAX IS 2 HEX DIGITS.
END
```

The D.COM program on disk -FOG/EX1.003 uses different logic to determine the amount of free space left on a disk. It adds up all of the space used by files on the disk and subtracts that total from the total space available on the disk, which it obtains from the disk parameter DSM. How to get this number is explained in the third booklet of DR.

I have enjoyed greatly the information given in the ***FOGHORN*** and I look forward eagerly to each new issue.

Robert J. King
Pittsburgh, PA

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To the Editor:

I just read the new issue of ***FOGHORN***. As always, it's good! You and all the contributors continue to make it a most useful tool for us who want to continue to tap the capabilities of our Osbornes.

An observation on that. These machines, whether they be O-1 S/D, O-1 D/D or Ex1's, have a lot of power that most of us haven't yet tapped. I expect to continue to use my O-1's (I have three) for some time to come. Yes, with a RAM disk and possibly 10 to 20 MB of hard disk, I'll be able to do whatever I need for a good long time.

Back to ***FOGHORN***. I read them from cover to cover because in EACH AND EVERY issue to date, I have found tips that saved me more than my annual FOG membership. For example, in the March issue, Jim Switz shared a tip from Gale Rhoades and Jim Woolley concerning rejuvenation of cloth printer ribbons. The one problem with Jim's tip was that it was buried in the Executive Library News. Many people who don't have an Executive probably didn't see this most helpful item. I recommend that the ***FOGHORN*** include a "rerun" of this in a section that is likely to be read by everyone. I enclose a suggested writeup.

I estimate that this tip will save me 6 to 8 ribbons a year just on the printing I do on my NEC 8023. At $7.50 per ribbon, that will more than pay my FOG dues for next year! Thanks, Jims and Gale!

This is not an isolated example. Every month brings something else that is really helpful. Doug Hurst's two DU-V77 articles helped me develop the scheme for disk directory recovery that I wrote about a couple of months ago. This has saved me numerous hours of data reentry time that would otherwise have been required to reconstruct data from disks that experience directory crashes.

It all leads up to my main idea. We have a good thing here in the ***FOGHORN***. If we will continue to share our experiences with our fellow FOG members, we can continue to get more and more out of these little boxes.

Thanks to you, David, [the ***FOGHORN*** staff] and to all the members who continue to submit this material. Keep it coming!

Frank Dunaway
Garden City, NY

* * *

WordStar "disk full"

I think that my son Hamilton and I may have a partial solution to a WordStar "diskfull" error message. I have researched the ***Portable Companion*** and the ***FOGHORN*** for a similar method, but cannot find any. However, that's not to say someone has not already discovered it. The following is a method for recovering from a WordStar diskfull error, without loss of text.

⇨

Before using WordStar for a task, open a document file and immediately save it (type ctrl KD), on another data disk that has sufficient disk space remaining to save a large file. Set that data disk aside for future use. The filename is optional (I suggest something like "Diskfull.fix"). Whenever a WordStar diskfull error message is encountered , follow WordStar's error message to press ESC key and then call up file rename from within the present file being edited (type ctrl KE). Exchange the data disk that is full with the data disk that has the DiskFull.fix file on it and rename DiskFull.fix to match the filename presently in use. After the file renaming is complete type ctrl KD and the file in memory will be saved onto the newly renamed file data disk. It is important to emphasize here that the disk file (diskfull.fix) must be absolutely empty and only the filename (diskfull.fix) be saved or an error message will be encountered preventing the file in memory being saved to it.

If you seem it worthy of passing on to others, I hope that this method will save someone a world of grief.

Tom Davies
Key West, Fl.

* * * * * * *

Olympia ES 100 RO and Micro-justification

I have an Osborne 1 connected to an Olympia ES 100 RO, which is a full size typewriter with built-it electronics for serving as a computer printer station. I am trying to implement WordStar micro-justification. The Olympia is capable of HMI (horizontal motion indexing) and therefore should be able to perform the WordStar micro-justification.

However, I have encountered several problems which the Osborne manual does not cover. I need to make certain patches in order to modify the implementations, such as Underscore Bidirectional printing, etc.

Can you help me find someone using the Olympia? Can you inform me as to the memory locations for the "Dot" commands and the "Print" commands in WordStar?

I would appreciate any help you could give. I would of course, share my experience with the Group.

Thank you for your help.

Ed Kalbaugh
Holbrook, New York

* * * * * * *

Credit Where Credit is Due

It was interesting to note that in the very issue, March 1984, where David Oates provides instructions to our "unknown authors" that on page 25 a review of SPL was written by that prolific author, Author Unknown.

Since I had the opportunity to see the SPL review in draft form, I can identify the author as our old friend and constant contributor, Doug Hurst.

I would like to join Bob Hamilton and publicly applaud Doug and his writing (style). I have not always agreed 100% with his political views, but I do feel that he is sincerely a user advocate. He has submitted controversial articles. Isn't that what a user's group newsletter is all about? I feel he is right about the members at large submitting articles. We don't subscribe to the ***FOGHORN***, we join the First Osborne user's Group.

Not everyone has the time or talent to write articles, but everyone finds new ways to make their computers more productive. These new ideas can and should be shared with others.

Finally, don't forget the novice. What comes so natural and seems so obvious is not so to the new member. Have patience and try to remember how lost you were on your first solo with your Ozzie. First time help makes great reading and often provides something new for the experienced user as well.

Jerome F. Lawson
29 Palms, CA

* * * * * * *

Dear *FOGHORN*

I have read the April issue of the ***FOGHORN*** and as always, there is at least one article that is worth the more that the annual FOG membership dues! In this issue, the dBASE articles are excellent. In particular, the idea by Mark Scaramella on using MACROS in combination with the 0-1's function keys will save me a lot of time.

Also, I want to comment on the paper stock used for the April ***FOGHORN***. It is much better than other recent issues as it permits better photocopies. Try to keep to this standard. Many of us keep our ***FOGHORN*** in a binder and photocopy the items that we want to use so that the information is readily available on a single page, kept at the computer desk.

Keep up the good work!

Frank R. Dunaway, Jr.
Garden City, N.Y.

* * * * * * *

Keyboard, Repair or Destroy!

I had read the same advise, in another computer publication, regarding cleaning computer keyboard contacts with contact cleaner or tv/tuner cleaner, as that in Craig Feied's letter in the June 1984 ***FOGHORN*** on page 15. Therefore, when I started having minor trouble with the Osborne keyboard at work, I sprayed the moving parts of the keys where I thought the contacts were located. This rendered the keyboard completely useless.

Evidently, some keyboard contacts can be cleaned satisfactorily using tuner cleaner, but not the "full Travel Membrane" type which came with the company Osborne. (See Michael Wong's letter on page 18 of the June ***FOGHORN*** for a description of this keyboard).

A phone call to Oak Switch Systems, Inc. revealed that this type of construction is not compatible with tuner cleaner and that the cleaner had probably dissolved the plastic which normally keeps the internal conductors separated, so that the conductors were probably permanently shorted.

The computer was repaired by replacing the keyboard.

Austin Ardoin
Cupertino, CA

* * * * * * *

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Learning Source

I wish to alert FOG members to a problem I have experienced with a software company and to recommend they do not buy programs from this firm. The firm is Learning Source, Inc., 17791 Fitch Street, Irvine, CA 92714, and the program I purchased from this firm is HomeTax.

About mid 1983, when Osborne software was being offered at greatly discounted prices, I purchased the HomeTax program from the Xerox store in Redmond, WA. The price of the program was right (about $30 plus tax), and being able to obtain an upgrade for the 1983 tax year for only $38 was an added incentive. In due course I was contacted by Learning Source about last November to offer me the upgrade as well as another program, similar to Home Accountant. I sent my check and original disks to Learning Source for the Hometax upgrade shortly after being contacted.

Not quite four weeks (!) passed before the disks finally arrived. I made a copy of each of the program disks and began running the copies, using phony figures to check out the operation of the program. I reached a response which answered my circumstances. I reset the computer, checked it out again using a different response and experienced a third crash. I contacted Learning Source by telephone immediately, using their toll free number, and was advised to return the disks to them, which I did. Approximately another four weeks (!) passed before the disks were returned to me, wrapped in plastic and protective cardboard much as they had been when I returned them to the manufacturer four weeks earlier. I plugged in the 'corrected' disks only to have another crash in the same place as before.

I contacted the manufacturer again and explained the problem. Since I had not had to place CPM on the returned disks, and the circumstances of the packaging, it was my opinion that nothing had been done to my disks, but the person I talked to at Learning Source assured me the programs had just been PIPed to my disks before they were returned to me. During this conversation I was told they were now aware of the problem with Osborne disks and were making corrections. The corrections were expected two days later, and Learning Source would send out two new disks rather than having me return my original disks to them another time. That was about two weeks ago. I have yet to receive the program disk from Learning Source.

Not only do I not have a program that works I am unable to talk with anyone at Learning Source to determine the status of the reworked programs. Invariably I am told the person I need to talk with is not available, having gone home, being about to go into the hospital or just not available. I did talk to the secretary for the firm's president, and she promised to call me back the next day to let me know what was going on. She never did. In each case I have had to initiate the conversation with this firm, usually reaching a switchboard operator who is unable to give me information. I finally asked for a refund of my purchase price, for which I would return the whole HomeTax program. So far I have received no response.

I give the Home Tax program and Learning Source the following subjective ratings:

Support to its customers: 0 stars
Response to customer questions: 0 stars
Documentation: N/A (The information is available at any IRS office, and the program is largely self explanatory.)
How well it operates: unknown (although the programs for the 1982 tax year appeared to operate)

For the reasons given in my letter I urge FOG members to avoid this firm.

Bernard E. Jensen
Bothell, WA

* * * * * * *

WS 3.3 + Single Density

A couple of weeks ago I bought the new WordStar Update with the new MailMerge from MicroPro. I have an Osborne 1 with single density disk drives and informed MicroPro of this. I now have two separate system disks, one with all the WordStar programs and the other containing the MailMerge program. Unfortunately I cannot combine them on one disk since the space requirements go beyond the single disk capacity. This fact makes the system practically useless for us Osborne owners with single density disk drives. I informed MicroPro of this but have not received any kind of reply. Phoning is also impossible because the telephone seems to be off the hook all the time. What recourse have I got under the circumstances? I have been had to the tune of 100 dollars, and the only thing I seem to be able to do is to warn others.

There were others problems with the new system, although not quite so serious. It was very time-consuming to install due to the shortage of disk space. And one special feature of the old WordStar had been eliminated on the new: the possibility to exceed the 4 character limit of the user functions by letting them overflow into the next one. This was the only way for me to use the German umlauts (a 6 character sequence since it involves going in and out of the eighth bit). The new system cut me off automatically after 4 entries. I could have used 2 user functions but that would have made my old files unusable with new system, since it would have involved two symbols instead of the one which I previously used. In the end I found a way out of this predicament which might be useful to other readers. Taking the hint from the last issue of ***FOGHORN***, I typed + at the Installation Menu which allowed me to go into the installation program. I chased down the hex address of the user functions on my old WordStar program (06d3h for user function 3). I changed the entry 04 to 06, thus allowing me to use the 6 character sequence 08/1b/3e/02/1b/3d. This is working fine now, thanks not MicroPro, but to Jim Switz who wrote the Miscellaneous Notes in the May 1984 ***FOGHORN***.

Ilse Newbery
Lexington, KY

* * * * * * *

A Zorba prisoner!

Help! I am being held prisoner in a Zorba. Does anyone have a program or patch which will allow the Zorba to read DD Osborne (SD is no problem).

We recently acquired a fire sale Zorba to share the workload on our Os. Exec. It would be extremely advantageous to share our WordStar & data files without having to use serial communications between the two computers.

I'd like to add that I've found the ***FOGHORN*** invaluable in regards to user support for the Os. Exec. and the FOG Executive library to be icing on the cake.

Dave Gurney
Winnipeg, Manitoba

* * * * * * *

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Please let FOG know of any difficulties encountered. Send all details, in writing, to the FOG office at P. O. Box 3474, Daly City, CA, 94015-0474, U. S. A. We can't promise a solution, but we will try to help.

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John Gaudio is an electrical engineer holding two U.S. Patents on computer systems. He's been a consultant to Osborne Computer Corporation and has written several articles for their magazine, The Portable Companion. He continues to write regularly for the newsletters of the First Osborne Group and the Denver Osborne Group, and has spent the last two years helping people to get more from their Osborne Computers. Survivor's Life Line is a Trademark of J. Gaudio Company.

TIPS FOR TYROS

Data Transfer From SuperCalc to WordStar

by Frank Dunaway

This subject has bothered me since I first started working with SuperCalc and WordStar. I would develop a neat spread sheet and would want to include it in a report, but I didn't know how to transfer the data. I guess I was just dense. I knew that SuperCalc files were in binary and that WordStar wanted an ASCII file, but I couldn't come up with a way to bridge this gap. I searched the manuals and the "Help Files" in the MIS section of the FOG Library. I bought supplementary books on both SuperCalc and WordStar and pored over them. Well, I didn't look in the right place in the books or I didn't ask the right question or the right person, or....

I had heard that SORCIM had included a new gimmick with SuperCalc2 called SDI, an acronym for Super Data Interchange. When I got my SuperCalc2 update, one of the first things I did was to read the section on SDI and begin to use SDI. I thought that SDI was, perhaps, the answer to transferring my spread sheets to WordStar. Well, SDI works after a fashion. However, even after the material is in the SDI format, it takes a lot of editing to make it compatible with other WordStar material.

I still felt that there must be an EASY way, BUT....

Eureka! The EASY method has been available all the time!

The procedure is so simple that those who write the manuals, etc. probably think that it is self-evident. Here's what to do:

1. When you are done with your SuperCalc operations [*and have performed a /Save, n:FILENAME.CAL*], simply output the SuperCalc spread sheet to Disk. This action writes the data from the spread sheet, row by row, to an ASCII file that you name. (NOTE: This is a one-way street. You can't go back to SuperCalc from the ASCII file!) Use the Output command as follows:

```
/O,D,ALL,D,n:FILENAME.EXT ↵
```

2. Then, exit SuperCalc and go to WordStar. Call up (FILENAME.EXT) as the file to edit in the Nondocument (N) mode. Edit to your heart's content. After you store the result with a ^KS or a ^KD, you can use it anywhere. Print FILENAME.EXT out as a stand-alone document OR include it as a part of another WordStar file.

Be sure to delete BORDERS (/GB) before outputting to DISK.

3. Including FILENAME.EXT as part of another WordStar file is also simple to do. When you are editing your "other" file and you come to the place where you want insert FILENAME.EXT, simply use the ^KR command, read FILENAME.EXT, and you have combined SuperCalc with WordStar!

Frank Dunaway is Vice-President of Long Island's Osborne Network, an Affiliated Member Organization. For information about LION meetings see the ***CALENDAR*** *section.*

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Making Tracks

by Bob Thomson

Some recent experiences and questions from newer members indicate that some discussion of the function of the "System" tracks on CP/M disks in general, and Osborne disks in particular, may be helpful. A common question is: "Why do I get the BOOT ERROR message with some disks and not with others? Does that mean those disks are bad?" The answer is no, probably not. But this requires some explanation. What I will do here is repeat some information which is in your Users Manual and other literature, but which you either overlooked or forgot.

When you first turn on your machine the only intelligence it has is contained in the Read Only Memory or ROM. The ROM is preprogrammed at the factory and contains:

Disk boot routines
Input/Output drivers
Video display drivers
Keyboard drivers & N-key rollover routine
Parallel port drivers

Obviously the video display drivers are at work at Power On because we see the sign on message:

```
OSBORNE 1

Rev 1.43 © 1982 OCC

Insert disk in Drive A and press RETURN
```

Obediently we press RETURN and the keyboard drivers and disk boot routines are pressed into service. (no pun intended).

Your machine came with several disks already formatted and containing programs ready to run. When you place one of these disks in Drive A and press RETURN, the disk drive A will run and, if there is no Autostart program on the disk, the A> prompt will be displayed signifying that the CP/M operating system has been loaded and is ready to receive commands. The CP/M operating system consists of several parts, among them the Basic Input/Output System (BIOS), the Basic Disk Operating System (BDOS), and the Console Command Processor (CCP). The code for these components of CP/M Operating System is contained in the "System" tracks of your disks. Osborne 1 disks are configured with the first three tracks, numbered tracks 0, 1 and 2, defined as the System tracks. When you press RETURN at start up, the system tracks are "read" and the CP/M System is loaded into memory (RAM). The machine now has the "smarts" to perform any CP/M programs loaded in.

But, you may ask, how do I put the system tracks on a disk? Good question. One of the disks provided with your Osborne is the CP/M or "System" disk. This disk contains the CP/M utility program SYSGEN.COM. Of course, you have made a copy of all of the "original" master disks and stored them in a safe place. Working with a copy of your CP/M disk which contains SYSGEN.COM, place the disk onto which you wish to write the "System" tracks in Drive B. From the A> prompt, type **SYSGEN** ↵ and, when asked which disk to read, select **A** ↵ , and the contents of the "System" tracks on the disk in the A Drive will be written into memory. When asked which disk to write to select **B** ↵ and the "System" tracks will be written onto tracks 0, 1 and 2 of the disk in Drive B. Now you will be able to "boot."

I follow the practice of "SYSGENing" all disks after I format them because I never know when I might try to "read" the system tracks with either a cold boot from a RESET or a warm boot with a CTRL C. Thus whether or not I am going to use the disk for "data" or programs, I can always bring up the System from any disk, and,since tracks 0, 1 and 2 are not used for any other purpose than to contain the CP/M Operating System, the capacity of the disk for data or programs is unaffected.

Incidentally, you can "SYSGEN" a disk any time, or as often as you wish. It is not required to be done only when you have just formatted a disk, nor is it necessary before you can use a disk to store data or programs. It is necessary only if you wish to "boot" the system from that disk.

It should also be mentioned that the System tracks also contain the SETUP configuration for the disk. Recall that the CP/M Utility program SETUP.COM allows you to configure the printer ports, toggle auto scrolling ON and OFF, select arrow keys for WordStar or CP/M, select screen size if you have the SCREEN-PAC (80 Column upgrade), and set your Function keys to your liking. When you copy the system tracks from one disk and then write them onto another disk using SYSGEN you are also copying the SETUP selections from the original disk. If you want a different configuration on the newly SYSGENed disk, you must then run SETUP and write your selections on that disk.

Why would you want to do that? A simple example will illustrate this. I have a printer which is connected to the IEEE 488 port and my SETUP configuration has selected the CENTRONICS printer configuration. Thus when I wish to print, I boot the system with a disk configured for a parallel printer connection. However, when I wish to use my modem to call up a bulletin board, I must use the serial port (RS232). Thus, on my "Communications" disk where I keep MODEM7 and CTERM, I have configured the SETUP to send and receive data through the SERIAL port. To change the configuration, it must be "read" into the machine's memory. Thus to change from a disk of programs, setup for the parallel printer connection, to one setup for serial transmission you must RESET and press RETURN to "read" the "System" tracks containing the Serial setup configuration.

Although I have not yet used it, I understand that the program in the FOG library (disk FOG/UTL.014) named TOGGLE.COM will switch the data transmission from the Serial Port to the Parallel Port and back again. You might want to put that on some of your disks where you would be likely to want to switch communication ports.

[*Bob Thomson sent us this article from the* TOGGLE , *the newsletter of the Tacoma Osborne Group, Tacoma, WA*]

* * * * * * *

HELP

(or That's Not a BUG it's a Feature)

By Bradley S. Albom

Welcome again to the ***FOGHORN HELP*** column. This is the place to send your questions about your Osborne's software. Problems you're having in trying to get it to do what you want or clever ways of getting to do things it wasn't supposed to. To get your question or answer into the column, just send a letter of a page or less to:

Bradley S. Albom
c/o The Computer Solutions Company
P. O. Box 206
Pt. Richmond, Calif 94807

Remember that the lead time for letters to the ***FOGHORN*** is about three months. You can include a SASE with your question and if I find an answer I will try to get it back to you as soon as possible. Also, please indicate in your letter whether it's OK for me to release your address and/or phone number in the column.

We also have a volunteer to handle dBASE II questions. You can mail your questions directly to him at:

Blake Mason
723 Old Country Road, Apt. N
Belmont, Calif 94002

THIS MONTH'S SOLUTIONS

We had a question a few months ago which has sort of fallen through the cracks. The MBASIC function FRE(0) is documented as returning the number of remaining free bytes in memory as well as forcing MBASIC to do its string variable garbage collection. There was however, no explanation of the single passed parameter. Bob Scott called some time ago and indicated that the passed parameter is just a dummy variable or space saver and has no function or affect on the returned value.

Printer Ribbons

I noticed a letter a couple of months back referring to the dangers of using the WD-40 printer ribbon reinking technique. Basically, if you spray a "used up" printer ribbon with WD-40 or some similar product, the fluid will redistribute the ink left on the cartridge, thus rejuvenating it. Unfortunately, the WD-40 doesn't do nice things to your print head (on dot matrix printers). While I can't confirm or deny this as I haven't tried it, there are alternatives to tossing your spent ribbons.

One other approach is offered by a re-inking machine advertised regularly in various computer magazines. A second solution comes from companies selling cartridge refills. You open up the cartridge holder, toss the spent ribbon in the garbage and insert a new ribbon. The company we got our replacement ribbons from is: American Ink Products Company, 527 Howard Street, San Francisco, Calif 94105, (415)-982-0161. Their cost for the C. Itoh Prowriter ribbons only is $2.65 each plus handling with a $15.00 minimum order. Taking them apart and putting them back together is not that bad and we're very pleased with the product. If I find out about other companies I'd be glad to include their address in this column.

Flopping Flippies

Or is that flipping floppies. In the on-going debate on turning floppy disks upside down to double your storage, we have yet another entrant (so to speak). I noticed a recent announcement that Capitol Records is getting into the computer business by offering its own brand of floppies. These floppies are of the flippy flavor (how's that for alliteration?). They come prepunched with an extra sector hole and an extra write protect notch. Just like the ones we've been cutting out by hand. Capitol explains that it is bringing years of experience in the recording industry to this new medium. It seems that they've satisfied themselves that flipping is OK, and let's face it, they've been dealing with magnetic recording media longer than any of the exiting floppy manufacturers. On the other hand, when was the last time you bought an american record that was free of pops and clicks.

Hardware Repairs

In the May-June-July edition of MTDOG Bytes Newsletter, I noticed another company advertising Osborne Replacement parts. The ad doesn't say anything about exchanges, but their price for an Osborne 1 disk drive (I assume Single Density) is $135.00 which seems in the right ball park. I'm sure if you write to them, you can get a complete price list. Their address is:

Dataport
Computer Products Research Facility
5525 Olinda Road — Building B
El Sorbrante, Calif 94803

AN INTERESTED OBSERVER

I've held back on my observations over the past few months because of both column size and time constraints. Well I can't hold it in any more, so here goes. The remainder of the column will be devoted to commentary, hopefully before it has gotten too cold. If you're only looking for technical answers, don't bother reading further.

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Big Blue Blows It

Followers of this column remember that I complimented IBM some time ago on its pending distribution of its PC based 3270 and 370 systems. I still think they will be wonderful tools and, conceptually, will far outshine the mediocrity of the IBM PC.

On the other hand, the popularity of the PC has been cause for great consternation among the micro community. There was a real fear that because of IBM's name, it would be able to foist any misbegotten piece of hardware and/or software on the public and force them to accept it. This just because it came from IBM. A scenario not all that different from the General Motors bureaucrats trying to convince drivers that they still wanted big cars in the late 70's and even today.

Well, at this time it should be obvious that the Personal Computer Customer is not going to let IBM do to him, what it has been doing for years to its large, corporate customers. The PCjr has been a miserable flop and not even a re-positioning of the machine as an entry level business computer will save it. Let's face it, the PCjr failed because it was second rate and could not compete with the well executed designs already available. That's right, just because a pile of doggie doo has the magic three letters on it, doesn't mean that it's not a pile of doggie doo.

If this isn't enough to convince you that IBM has to play by the same rules as everyone else, consider the luke warm reception of its Local Area Network and its portable computer. Compaq (the largest IBM compatible portable maker) may be a little nervous, but it shows no sign of being in mortal danger.

All in all, this experience may be good for IBM. I hope someone at the policy setting level realizes that they are competing in a different market. A market that won't tolerate slipshod design and execution, no matter who's name is on it. If they realize this, then maybe we'll see them pay a little more attention to what customers really want, and not what IBM thinks they should have. But then, maybe I'm being naive. You can't teach an old dog new tricks. Just remember that the PC was designed totally outside of the IBM culture. A feat not likely to be repeated.

The Same Goes for DEC

Along the same lines, it's time DEC woke up to its fiasco. I get very emotional when I think about the mess DEC has made of its Professional series of micro's. This is largely because I've spent a number of years playing with their larger machines and know about their normal quality first hand.

Now I'm not totally unimpressed; the PRO-350 hardware is really nice and based on the PDP-11 architecture holds incredible potential. Unfortunately it seems some ignorant yahoos got a hold of the Professional's functional spec and decided to add VAX compatibility. To support this spec, they could have stayed with one of their time tested operating systems, but instead, these bozos had to create a bastardized piece of trash (P/OS pronounced pus) that isn't compatible with anything! Oh sure, they say you can convert programs to run on it, but I've tried and if that's compatibility, I'd rather translate my Pascal programs into COBOL.

To make matters worse, DEC seems to have this weird idea that the problem is in marketing. So twice over the last two years, they've reorganized the support groups for their personal computers to try and solve the problem. Wrong! Come on guys, if you don't know a technical problem when you see one then you're in the wrong business. Recently Forbes tried to justify Ken Olsen's (the head of DEC) fat salary by saying that it was his guidance that led the company to where it is. Perhaps, but with the kind of guidance he's been providing lately, DEC would be better off if he retired and allowed a competent leader to step in.

When the Men Jump from the 13th Floor

Moving on, I'm really tired of hearing nearly every computer journal, newspaper and commentator speculate on the demise of the computer industry. You can recognize this drivel because it is couched in terms of "the coming shakeout" and "a handful may survive." What poppycock! No, no I don't mean to imply that there won't be failures. There will be lots of them. But that's not the point. No one really notices when a small computer company goes under, but when one of the big boys like TI hiccups, they go around yelling that the sky is falling.

You see, the press likes doom and gloom stories. It sells! Unfortunately, they tend to miss the whole picture. I contend that a big failure is no more important than a small one. Remember, there are a number of tiers in the microcomputer market.

You've got the big generic guys like IBM, DEC, TI and a few others. They're going to be selling computers to the unwashed masses, or so they hope. This will put them into the largest gross dollar share of the market, which is fine if that's where you want to be. Unfortunately for them, and anyone else who aspires to this level, this is where the most impressive shaking occurs because there are many more chips being cashed in.

There is however, a next level down occupied by companies that don't necessarily want to put a computer in everyone's living room, but rather appeal to a more specialized market. For example, Kaypro and Morrow. At this level, the companies don't have to be everything to everyone. They get to balance price versus performance versus other features. To survive, all they have to do is balance things appropriately so that a large (or small) enough piece of the market is satisfied with their product.

At the bottom end you have specialty companies like Grid and Mindset. Their machines excel in one or more specific areas, usually to the detriment of all others. Their markets are even smaller, but if they've specialized correctly, they too will have a loyal enough following to keep them going.

This is exactly what has been going on in the maxi computer market for years. Even though IBM has what might appear to be a monopoly in this area, it doesn't prevent companies like Amdahl, Data General and the like from finding their own niches and surviving quite profitably.

Now back to the coming shakeout. Companies most often get themselves into trouble when they try to jump from the tier they're on to one they're either not ready for or not positioned for. Osborne did it with visions of greatness that overstepped its abilities. The coming shakeout will be made up of other companies who have visions greater than their market niche will support.

It is unfortunate that venture capitalists will continue to push a company beyond its limits because of their visions of 100 fold returns. Not to mention managers who have been trained to believe that triple digit growth is something that happens in a bad year.

Which brings me to another wonderful Forbes quote. This one from a European manager commenting on his brethren in the U.S. "The U.S. manager is like a driver who always accelerates, so when he meets a bend or curve, he runs off the road." What a fitting allusion to what happened to Osborne.

And speaking of triple digit growth, there are many companies that have been around for generations whose growth can be measured in single digits. Yet they have survived! I think you'll find that many of these "lesser" performing companies are privately owned. And why the poor performance? Because the owners are not willing to gamble with something that has become so dear to them for the sake of a gaining a few points of market share (maybe). A venture capitalist on the other hand, has put his money on the table and needs to shoot the dice. He needs to push his investments beyond their limits because otherwise how will he find the 1 or 2 out of a hundred that will flourish at the next tier and become stars. I wonder just how many unnecessary failures have been prompted by this approach.

Back to the shakeout again, what is it going to be like after D-Day for computer companies? Not a lot different from today. Most of the same niches will still be there. The contestants may be a little different. But we're not going to see IBM (or AT&T) dominate the whole market. Just the niche it has chosen to fight for and win. The basic advances will continue to show up first in the specialty areas where they will be refined before gaining acceptance in broader markets.

LOGOUT

Well, that's it for this month. I still haven't gotten any new freebies to mail out. Let's keep those cards and letters coming. And if I remember, I'll include my thoughts on Adam's new company in the next column.

* * * * * * *

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ARTICLES

CO-POWER 88 on the Kay Pro 4

by Bob Thomson

A couple of months ago, in the Detroit De FOG newsletter, an appeal was made to urge SWP Microproducts to continue development of their 8088 co-processor board for application to the Osborne 1 . In December, I called them and was talking to one of their representatives who made great promises, stating that they had it running on the Osborne, and that if they could just fill a couple of big production orders, they would have an Osborne version available in February or March .

We have ordered three coprocessor boards for KayPros, one for a KayPro 4 and two for KayPro 10's . The KayPro 4 board was delivered last week (February 6th or so) . The KayPro 10 boards are not yet ready for delivery, may be a few weeks yet . And the Osborne version . . . who knows? I believe it does depend on what sort of market they perceive . [*Some Osborne units have been shipped — Gale Rhoades*]

The Co-Power 88 is a very interesting "add on" . There actually two boards . One is relatively small (about 2-1/2"square), which literally plugs into the Z80 socket on the mother board, after removal of the Z80, and the Z80 then plugs into a slot on the piggy-back board . The other board is the one which contains the 8088 and the memory chips . It is about 6 or 7" square and, I was told, mounts over the Osborne 1 mother board, below the disk pocket under the A Drive. On the KayPro 4, which has much more space, it mounts vertically behind the disk drives, and the power leads were plugged into an existing terminal, between it and the existing plug, so that no soldering is necessary. With the Osborne version, it may be necessary to solder two wires to the power supply. An 8 to 10 inch ribbon cable connects the two boards.

The KayPro 4 installation was easy. No special skills were necessary for installation.

When I talked to SWP in December they were quoting a list price of $700 which included CP/M 86, MS-DOS and a program to configure the board as a Ramdisk. Since that time, the list price has been dropped to $500 and CP/M 86 is no longer included, but can be had for an additional $60. This is being written in early February 1984. Good discounts may be available for quantity purchases.

In the February 84 issue of ***Microcomputing***, there is a review of Co-Power 88 by Thomas Howe. In an article titled *Kaypro Joins the PC Crowd* he discusses the capabilities of this product and I refer you to that article for more details. He makes a comment about the heat of the 8088 chip, stating that it got so hot in ten minutes that he couldn't touch it ! This is an exagerration ! We placed a probe on the surface of the chip after installation in the KayPro 4 and it stabilized at a temperature of 50 deg C (122 deg F). This is certainly warmer that the Z80, but according to the spec sheet for the chip, it is well within its operating temperature limit of 70 deg C (158 deg F). It is a good idea, though, to order a ceramic chip, rather than a plastic one, for more uniform temperatures within the chip, hence cooler internal temperature. It may not be a good idea to glue a heat sink on the chip as Howe suggests, unless you know exactly what you are doing and are sure that you use the proper conducting adhesive. Using the wrong adhesive could actually insulate the chip preventing surface cooling and raising the operating temperature.

One thing that might be looked into is a cooling fan. With Co-Power 88 installed in an Osborne (if our dreams are ever fulfilled) you will now have two heat generating devices, the Power supply and the 8088 chip. The 8088 may be OK but it may heat up some other components unless air is passed over it to carry heat away.

Co-Power 88 comes with 128K or 256K of memory. For the difference in price it is silly not to go for the 256K. As mentioned above, it can run MS-DOS programs (PC compatible?), CP/M 86 programs and can provide 247K of Ramdisk capacity.

Thomas Howe had some software startup problems which he describes, but he obtained assistance from SWP and got it running. It sounds like there is still some learning to be done, and perhaps some development. We have not yet run the KayPro 4 installation, so can make no comment on that.

[*Bob Thomson sent us this article from the* TOGGLE , *the newsletter of the Tacoma Osborne Group, Tacoma, WA*] *Bob Thomson is President of Tacoma's Osborne Group, an Affiliated Member Organization. You'll find information about TOG meetings in the* ***CALENDAR*** *section.*

* * * * * * *

Sleuthing

COMM-PAC Modem Operation

by Jim Enright

I would like to share with anyone interested in generating object code for the COMPAC modem some necessary knowledge for this purpose.

1. Pin 9 (Ring Indicator) on the Osborne 1 modem connector is not connected in the modem.
2. Pin 8 (Modem Control Bit) and pin 4 (Modem Status Bit) are the only control pins that have a function with the COMPAC modem.
3. Pin 8 is connected directly to the "RTS" (Request To Send) pin on the MC6850 ACIA chip in the Osborne. When this pin is low (the active state), a relay is activated in the modem to connect the phone line. This same relay is used to do the pulse dialing.

4. Pin 4 functions as a "Ring Indicator" and as a "Carrier Detector". The signal on the pin is inverted, level shifted and then connected to the "DCD" (Data Carrier Detect) pin on the 6850. When a ring or a carrier is detected on the phone line the 6850 pin goes to a low state.
5. If the line is not connected (RTS high) and a ring is detected before answering, The modem comes on in the "Answer Mode" when the line is connected (RTS low).
6. If the line is connected prior to a ring the modem comes on in the originate mode.

Armed with this information one can write the following rules about the COMPAC modem when it is used with the Osborne 1:

ORIGINATE MODE To bring up the modem in the originate mode:
1. Bring RTS low to connect line.
2. Monitor DCD for loss of carrier during communications.

ANSWER MODE — To connect modem in the answer mode:
1. Monitor DCD for a ring detection.
2. Wait for first ring to stop.
3. Bring RTS low to connect line.
4. Monitor DCD for loss of carrier during communications.

DIALING To dial a number:
1. Connect modem in originate mode.
2. Bring RTS from low to high and back to low the correct number of times for each digit.
3. Perform step 2 at a 10 pulse/sec rate.
4. Wait 1 second between each digit.

The information presented here was obtained by observing the Osborne 1 schematics, observing results during operation under the Amcall communications program, opening the modem and peering inside, measuring the voltages on the connector pins during operation and obtaining info about the integrated circuits therein. I have not been able to obtain a schematic of the modem itself. I believe the information to be correct, but it may be in error because of insufficient data. The most likely error would be in the way the modem determines whether it should operate in the originate or answer mode. I did not actually measure the mark/space frequencies when testing the modem. The modem may determine it's mode from the carrier frequency sent by the remote terminal. If this is true, the rules for programming it will not change, however.

* * * * * * *

Assembly Language Input and Output Through the RS-232 Port

by David Wright

If you are a beginning assembly language programmer then this article may help solve a few mysteries regarding RS-232 input and output, on the Osborne 1. Even if you aren't interested in the serial port or in writing terminal programs, the lessons here may be valuable in understanding how those programs work and why special versions are needed for the Osborne.

Being the curious type, I once tried to adapt a published terminal program to the Osborne. Other than learning a lot from the exercise, the outcome was a total failure. Then, I tried to understand the overlay modifications to the MODEM7 (now upgraded to the MODEM7xx series) program for the Osborne 1. Being quite new at this, I couldn't figure out the initialization sequence in the overlay file that allowed the program to accommodate the Osborne's 'multi-banked' operation. That's because I couldn't really understand what 'multi-banked' meant or how it worked. After considerable re-reading of the source code the methodology finally dawned on me and I've described it in detail in this article.

In the 8080 assembly language generally used for CP/M software, input and output are usually handled through the use of the 8080 mnemonic codes "INP n" and "OUT n," where "n" is the number referencing a particular input or output "port." For example, when the programmer wishes to output a byte to the serial port, he or she simply "loads" it into the accumulator and uses an instruction such as "OUT 5," where 5 (hypothetically) represents the address of the serial port.

Things are different on the Osborne. Rather than having ports, we have memory mapped input and output. This simply means that a section of memory is devoted to the purpose of getting information into and out of the computer. The idea of memory mapping is really very simple if we use a mailbox analogy. Information intended for the serial port is simply placed into the proper box (let's call it the 'out' box) until it is ready to be sent. Information coming in from, let's say, a modem, is placed in the 'in' box until the program is ready to pick it up. The advantage is quick input and output but it 'cost' us a bit of memory space since certain memory addresses are devoted to or "mapped" for specific purposes. The Osborne maximizes memory by using banks, one memory bank for user RAM and one for the memory mapped addresses. This gives us the speed advantage while allowing us the greatest possible direct access memory.

It's in getting to those "mailboxes" that things get a bit confusing. While the notion of banks may now be fairly clear, it is the switching back and forth between them that can lead to confusion. That is precisely what must be done to put information in those I/O 'boxes.' To clarify this process let's start by looking at the diagram of the memory layout in Figure 1 (addresses are for a double-density machine). Let me refer you to the User's Guide or Technical Manual for more detailed diagrams and descriptions. By the way, these are generally referred to as "memory maps," but to avoid confusion with the term "memory mapping" I'll call them diagrams. Also, there is a third bank that does not pertain to this discussion.

We will only be concerned with the area of memory between 0100 and CB00, that is, the transient program area (TPA) of RAM. The area above and below the TPA is used by the operating system and the Osborne 1 hardware. You will notice that the area between 4000 and CB00 (up to FFFF in fact) is identi-

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cal in both banks. Bank 2, then, mimicks, or "shadows" bank 1 in this region. Therefore, anything in memory locations between 4000 and FFFF (including program code) is available no matter which bank is switched into use.

Now, notice the area between 2000 and 3000 in bank 2. This area contains the "mailboxes" referred to above. I have focused on two of these: the serial port buffer (2A01) and the serial port status address (2A00). Here we must stretch our "mailbox" analogy a bit since both the "in" and "out" box are at the same location. The status box is the key here. When it contains one piece of information the program knows that the buffer is an "in" box, and with another value, it becomes an "out" box. Any byte sent to serial port must go through address 2A01. To to do so requires that bank 2 be switched in.

The User's Guide gives information on this bank switching but I found it very confusing at first. Any program is, of course, in bank 1 since that's where it is loaded into the TPA. The switching routines and any instructions to be executed after the switch must be located above 4000 since once the switch takes place, memory and parts of the program below that point "don't exist" — that is, they are unavailable. So how do we get this all to happen with a program that isn't big enough to extend up to and past 4000? Let's look at that MODEM7xx initialization sequence as an example (Listing 1). I have chopped this up quite a bit leaving only the code pertinent to this discussion and added some line numbers in parentheses. If you have access to the entire source file you will likely find that it, as with other source code, contains many good lessons in assembly language programming.

First, notice the instructions in lines 1,2 and 3. These are vectors from the main, machine independent parts of the program to the machine dependent input/output routines. Vectors are simply instructions that cause the program flow to jump to a particular point in memory. These particular vectors "CALL" the routines OSTAT, OSOUT, and OSIN. The source code for these routines are in lines 39-55 which means that when the program is loaded they will reside low in the TPA part on memory. But, for them to do their job the routines must reside above 4000h while the program is running.

Now look at lines 4 through 35. This is an initialization sequence that moves the routines mentioned above to their proper locations. It is only intended to be used once each time the program is run. Let's look at it in detail. Lines 4 thru 8 just make sure we only initialize once by checking a flag. Line 9 determines the address of the top of the TPA (i.e., the start of BDOS/CCP) and backs down a bit to determine a starting address that the routines can be moved to without overwriting

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part of the operating system. Lines 13 & 14 load the starting and ending address of the routines in their original locations in the TPA before the initialization sequence (lines 39-55) and subtracts to get the total number of bytes to move.

Line 16 is the real trick here. Remember that the Osborne has a Z-80 CPU. This assembly code is written in 8080 mnemonics; the Osborne will only execute Z-80 code. Of course, we can't use the Z80 mnemonics since we are using an 8080 assembler and they wouldn't be recognized. Once assembled into numeric operation codes the Z80 will, of course, recognize 8080 code or Z80 code even if they are mixed together. The trick then is to "pre-assemble" the Z80 code and store it as bytes in the file so it won't give us an error with ASM.COM. The numbers 0EDh and 0b0h are the machine codes for a Z80 instruction (LDIR) that will move a block of memory. By the way, the HL register tells where to start the block move, the DE register contain the destination and the BC register becomes a decrementing byte counter. The proper values are simply loaded into their places and the LDIR goes to work.

Once the routines have been moved to their proper place we have a couple of other important details to take care of. First, since the program uses the memory between itself and the operating system as an input buffer for capturing data prior to writing it to disk we don't want that data to overwrite our carefully placed routines. Therefore, we must fool the operating system into thinking that it's BDOS begins at an address lower than our routines. This essentially makes our routines a temporary part of the operating system. At this address we place a vector to the real BDOS entry point so calls to the phony location actually get to where they are intended to be. Lines 17 through 26 accomplish this and now the program simply thinks it has a bit less RAM to work with. Second, we need to make sure our program knows where OSTAT, OSOUT, and OSIN are so they can be used. Lines 27 thru 35 calculate the exact addresses and patch them into locations corresponding to lines 1, 2, and 3.

Now when the main program calls the status, input, or output routines, control will be passed to the proper place in memory. The routines will first perform the switch to bank 2. Then the function of the routine can be performed, for example, checking the status at address 2A00 or reading a byte at address 2A01 (remember, the routine will still be in operation since it is high enough in memory to 'co-exist'). When the task is done the routine switches back to bank 1 and passes any information (i.e. the status or the received byte) back to the main program.

Hopefully, you can see it's not really all that mysterious after all. The same principle can be used to access other addresses in bank 2, to perform such functions as direct screen manipulations, accessing the IEEE port, altering the interpretation of the keyboard, or directly addressing the disk interface. I can assure you that a lot of that is still beyond me, but maybe someone else will write a follow-up, to further enlighten us.

```
FFFF --------------     --------------
     ¦ CP/M &     ¦     ¦ CP/M &     ¦
     ¦ VIDEO      ¦     ¦ VIDEO      ¦
    \/\/\/\/\/\/\/     \/\/\/\/\/\/\/

    \/\/\/\/\/\/\/     \/\/\/\/\/\/\/
     ¦            ¦     ¦            ¦
     ¦ (BDOS/CCP) ¦     ¦ (BDOS/CCP) ¦
     ¦            ¦     ¦            ¦
CB00 ¦------------¦     ¦------------¦
     ¦            ¦     ¦            ¦
     ¦            ¦     ¦            ¦
     ¦            ¦     ¦            ¦
     ¦    RAM     ¦     ¦    RAM     ¦
     ¦            ¦     ¦            ¦
     ¦            ¦     ¦            ¦
     ¦            ¦     ¦            ¦
     ¦            ¦     ¦            ¦
     ¦            ¦     ¦            ¦
    \/\/\/\/\/\/\/     \/\/\/\/\/\/\/

    \/\/\/\/\/\/\/     \/\/\/\/\/\/\/
     ¦    RAM     ¦     ¦    RAM     ¦
4000 ¦------------¦     ¦------------¦
     ¦    RAM     ¦     ¦  NOT USED  ¦
    \/\/\/\/\/\/\/     \/\/\/\/\/\/\/
                                        /¦/\/\/\/\/\/\/\
    /\/\/\/\/\/\/\     /\/\/\/\/\/\/\ / ¦------------¦
     ¦            ¦     ¦  NOT USED  ¦ /  ¦ 2A01 buffer¦
3000 ¦    RAM     ¦     ¦------------¦/   ¦------------¦
     ¦            ¦     ¦ I/O        ¦\   ¦ 2A00 status¦
     ¦            ¦     ¦ ADDRESSES  ¦ \  ¦------------¦
2000 ¦------------¦     ¦------------¦    /\/\/\/\/\/\/\
     ¦            ¦     ¦            ¦
     ¦    RAM     ¦     ¦            ¦
     ¦            ¦     ¦            ¦
0100 ¦------------¦     ¦------------¦
     ¦    CP/M    ¦     ¦            ¦
0000 ¦------------¦     ¦------------¦
```

FIGURE 1

LISTING 1.

```
: M712OS.ASM - Osborne Overlay for MDM712.COM file - 07/27/83
                         .
                         .
                  (various equates etc.)
                         .
                         .
(1)  IN$MODCTLP:  CALL    OSTAT    ! RET    :get the I/O sta-
                                            tus 12AH
     DS           6
;
(2)  OUT$MODDATP: CALL    OSOUT    ! RET    :send a character
                                            to the I/O 134H
     DS           6
;
(3)  IN$MODDATP:  CALL    OSIN     ! RET    :get a character
                                            from the I/O 13EH
     DS           6
```

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```
                              .
                              .
                    (more of the program)
                              .
                              .
; This is the Osborne initialization routine.;
(4)      INITMOD:
         LDA       FINITFLG     ;FLAG SET YET?
(5)      ORA       A
(6)      RNZ                    ;IF YES. ALREADY BEEN THIS WAY ONCE
(7)      INR       A            ;OTHERWISE SET FLAG
(8)      STA       FINITFLG     ;..AND INITIALIZE THIS ROUTINE
(9)      LHLD      0005H+1      ;FIND START OF BDOS
(10)     LXI       D.-0100H     ;GO TO FIRST PAGE AHEAD OF BDOS
(11)     DAD       D            ;HL NOW POSITIONED ONE PAGE BELOW
                                BDOS
(12)     PUSH      H            ;SAVE THE ADDRESS
(13)     LXI       D.BDJ        ;POINT TO OUR ROUTINE TO PUT THERE
(14)     LXI       B.CDLEN+2    ;SET LENGTH OF CODE
(15)     XCHG                   ;SWAP DE & HL   .
(16)     DB        0EDH.0B0H    ;Z80 LDIR
;
(17)     LHLD      0005H+1      ;GET BDOS ADDRESS BACK ONCE MORE
(18)     POP       D            ;GET THE STARTING ADDRESS OFF STACK
(19)     PUSH      D            ;PUT IT BACK ON THE STACK
(20)     INX       D            ;POINT TO ADDRESS POSITION
(21)     XCHG                   ;PUT INTO 'HL'
(22)     MOV       M.E          ;STORE 'LSP' ADDRESS
(23)     INX       H            ;GET 'LSP' LOCATION
(24)     MOV       M.D          ;STORE 'MSP' ADDRESS
(25)     POP       H            ;GET THE ADDRESS BACK ONCE MORE
(26)     SHLD      0005H+1      ;NEW  ADDRESS  TO  PROTECT  FOR
                                OVERWRITE
;
;
(27)     LXI       D.OSIN-BDJ   ;GET THE LENGTH OF ROUTINE TO MOVE
(28)     DAD       D            ;COMPUTE  ADDRESS  OF  THE  'OSIN'
                                ROUTINE
(29)     SHLD      IN$MODDATP+1 ;PATCH  CALL  FOR  ``GET  CHAR.''
                                ROUTINE
(30)     LXI       D.OSOUT-OSIN
(31)     DAD       D
(32)     SHLD      OUT$MODDATP+1 ;PATCH  CALL  FOR  ``SEND  CHAR.''
                                ROUTINE
(33)     LXI       D.OSTAT-OSOUT
(34)     DAD       D
(35)     SHLD      IN$MODCTLP+1 ;PATCH  CALL  FOR  ``GET  STATUS''
                                ROUTINE
                              .
                (routines to set the baud rate)
                              .
(36)     RET                    ;BACK TO THE MAIN PROGRAM
;
(37)FINI-
TFLG:    DB        0
;.....;; - ROUTINES THAT GET PLACED JUST UNDER 'BDOS' OVERLAYING 'CCP':
(38) BDJ: JMP      $-$          ;THIS GETS PATCHED TO JUMP TO BDOS
                                ENTRY
;
(39) OSIN: DI                   ;DISABLE INTERRUPTS
         OUT       0            ;SWITCH TO ALTERNATE PAGE
         LDA       MODDATP      ;GET DATA BYTE
         OUT       1            ;SWITCH PAGES BACK
         EI                     ;RE-ENABLE INTERRUPTS
         RET
;.....
;
(45)
OSOUT:   DI                     ;DISABLE INTERRUPTS
         OUT       0            ;SWITCH TO ALTERNATE PAGE
         STA       MODDATP      .SEND DATA BYTE
         OUT       1            ;SWITCH PAGES BACK
         EI                     ;RE-ENABLE INTERRUPTS
         RET
;.....
;
(50)     OSTAT:    DI           ;DISABLE INTERRUPTS
         OUT       0            ;SWITCH TO ALTERNATE PAGE
         LDA       MODCTLP      ;GET STATUS BYTE
         OUT       1            ;SWITCH PAGES BACK
         EI                     ;RE-ENABLE INTERRUPTS
         RET
;.....
;
(55)
CDLEN:   EQU       $-BDJ        ;LENGTH OF CODE TO COPY
;
;
(56)     END
```

*David Wright is the President of COG (Classic Osborne Group), an Affiliated Member Organization. For information on joining this group, write to Rt. 1 Box 197, Nicholson, Ga. 30565 (c/o Bob Herrin). For information about the group meetings, call (404) 353-2127 in the evenings or check the **CALENDAR** in the center of this issue.*

* * * * * * *

HARDWARE REVIEWS

DRIVE C:

by Jim Peterson

If you are frustrated by the slow operation of software like WordStar and dBASE,and they are slow when you are moving through documents/files over and over, there's a product on the market that will solve your problem. "Drive C:", manufactured by Drive C: of Emeryville, CA, is a RAM disk which can greatly increase the operating speed of your programs.

A RAM disk is a device that uses random access memory to emulate a disk drive, but without the limitations inherent to disk drives. A RAM disk replaces one of your disk drives and functions exactly like the replaced drive. With a RAM disk you are not faced with the slow operation of the drive, nor the noise of the drive — and more importantly, BDOS errors are almost nonexistent.

Drive C: is a handsome device which fits neatly into the right side disk storage slot of the Osborne. Installation is easy and fast. You simply slide the Drive C: unit into the storage slot, plug it in to the IEEE-488 port, plug the monitor cable into the Drive C: unit, and start it up. Time elapsed between opening the box and start up should be no more than 15 minutes.

Drive C: comes with its own configuration software which includes a program that is installed on your program disks to boot Drive C:. A point of irritation at this point, however, at least with my Drive C: unit. According to the unit's manual, the software includes three programs: DRIVEC.COM, DCARCH.COM and DCRET.COM. My disk, however, contained only the programs NCCLOAD.COM and DFD.SPR. The manual contained no references to these programs, nor were any of the programs listed in the manual on my program disk. After playing with the programs for about 30 minutes, I discovered that the NDCLOAD.COM was apparently the Drive C: loader program. I renamed this program to "DC.COM" for ease of use. The Drive C: unit is supposed to also contain programs which will automatically load Drive C: and rename the logical drives, programs to create archive files, and software to turn the Drive C: unit into a print buffer. These additional programs, however, were not included with my unit. Instead I found a notice which stated that the documentation for the print buffer and the auto loader programs was not complete and these items would be mailed as soon as the documentation was completed. I've never had any problems with mail order, at least for computer items, so I have no reason to believe that I won't get these items.

To run Drive C: place DRIVEC.COM on your program disk (e.g. WordStar) and boot the program in the left drive. It is necessary to start Drive C: from CP/M's ">A" prompt and for this reason I recommend that either the AUTOST.COM program be deleted from the program disk, or that you use DDT to reconfigure the AUTOST.COM to call DRIVEC.COM rather than the program you are going to work with.

Once you are at CP/M's ">A" prompt, type "DRIVEC" (or in my case "DC") and <return>. The Drive C: unit is then activated. On the front of the Drive C: unit is a small indicator light. that tells you the unit is operating, which is necessary as the unit makes absolutely no noise. Without the loader program which was not included with my Drive C: unit, starting up the unit requires two steps: first, starting up the unit so that program files can be transferred to it, then RESETTING the computer and restarting Drive C: Once Drive C: is in operation you must push the RESET button to change disk drive designations, which is the reason the system must be started twice. To further explain this, when you start the unit using "DRIVEC" (or again, "DC" for me) Drive C: is activated as drive C, and drive A remains A. In this mode, the system reacts exactly as the drives are named. To make use of Drive C:, however, programs and/or files must reside on the Drive C: unit. To get them there you use PIP. Since WordStar is designed to operate from the A drive, you must either move both your files and the WordStar program to Drive C: or run WordStar from drive A, and rename Drive C: to drive B. To do either, Drive C: must be restarted by pressing the RESET button. You might expect that files on the Drive C: unit would be lost if the RESET button is pushed, however, the unit was cleverly made to retain data except when the power is turned off.

Once up and running, use Drive C: just like your Osborne's disk drives.

How well does Drive C: work? As I indicated, using it with both WordStar and your working files on the unit, WordStar runs FAST and clean. dbase? Again, it runs FAST, and again, the greatest advantage of speed is obtained when both dBASE and your files are on the Drive C: unit. With WordStar and your working files on Drive C: WordStar operates like one of those very expensive dedicated wordprocessors. Functions like deleting a line (CTRL-Y) work instantly rather than after 1-3 seconds. You'll fall in love with it.

After a month of using Drive C: I have not run into any significant problems with this product, aside from the somewhat cumbersome method of starting and relogging it. This should be solved, however, when I receive the correct software and can use the auto loader program (titled QUICKPAC).

The two advantages of the Drive C: unit, as I have previously stated, are its speed and its noiseless operation. It is easy to use and functions exactly as do the Osborne's two drives. One point of caution is essential, though. Since Drive C: is a RAM disk, files created or edited on the unit are NOT saved to disk. To retain your material you must PIP your files back onto a real disk. If you don't and the computer is shut off, all the data on the Drive C: unit is lost for evermore (and no, there is no way to UNERA these files...keep in mind that they never existed on disk).

To save your files, when using WordStar, for example, press the RESET button, and type "DRIVE C". At this point, the physical drives A, B and C are again renamed to the logical drives A, B and C. PIP the edited files back to either the A drive or B drive and you are done. Because of this backup procedure, Drive C: is not much use if you only briefly use your Osborne for short documents. It is most suited to applications that require the use of large files and/or lengthy periods of operation, though this is obviously a personal decision. To get an idea of start up time, the Drive C: unit takes about 2 minutes to "PIP" approximately 150Kb of WordStar programs and working files, and another 2 minutes to move the files back to disk. If you change programs (say from WordStar to dBASE) you must insure there is enough room left on Drive C: to accommodate the new files, delete the existing files on Drive C:, or shut off the Osborne to erase the files on Drive C: I have not found a way to otherwise erase Drive C: According to the unit's manual "ERA *.*" won't work as there is a ".SYS" file on the unit. I don't know whether this is true or not, and have not tried to "ERA *.*" Drive C: yet. The only shortcoming I have found with the unit, other than the problem I had with software, is that my printer must be on for Drive C: to function. If it is not, the unit will not start up.

Drive C: comes in two versions...either 192Kb or 384Kb. Although I have the 192Kb, I wish I had gotten the 384Kb model. I have several dBASE applications that exceed 192Kb. Having both dBASE and my programs on Drive C: would be the most desirable way to operate. Drive C: also offers an upgrade to 384Kb for those who have the 192Kb version.

The unit comes ready to install and includes the unit and

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connecting cables between the unit and the IEEE-488 port and between the Osborne's monitor port and the unit. If your printer is the parallel variety, the Drive C: unit includes an IEEE-488 port into which the printer cable is plugged. Installed, Drive C: does not interfer with the keyboard when closed. The unit itself has a brushed aluminum finish and, according to the manual fits either the tan or blue Osborne. It also contains a jack for an external monitor which eliminates the need for a monitor adapter such as the EXMON, though either can be used.

Overall, Drive C: is a well-made product that does exactly what it is advertised to do, and that is to provide the user an ultra-fast RAM disk. At this writing the 192Kb version costs $395 while the 384Kb model sells for $695. The upgrade to 384Kb is $330. Considering the benefits (high-speed RAM disk, third drive, and the added software to configure the unit as a large capacity printer buffer) the money is well spent. I have enjoyed my unit without reservation. The unit is advertised to increase operating speed up to 10 times that of the regular Osborne drives and I believe it. I haven't benchmark tested the unit, but it is obvious once you use Drive C: this claim of increased speed is accurate.

The most significant improvement in speed I have experienced is with dBASE programs and files. I have one application that requires dBASE to perform a large number of COUNT operations. Without Drive C: this application takes almost five minutes to complete. With Drive C: it runs in approximately 1 1/2 minutes. When you are working with a complex dBASE application the added speed makes a world of difference.

[*Drive C: is available from, Drive C:, 1690 65th Street, Emeryville, CA 94608, (415) 652-3222. You'll find a DriveC: ad in this issue.*].

* * * * * * *

Nuevo Electronics 80 Column

by Jerome F. Lawson

Having decided on an 80 column capability for my OZZIE, I was merely waiting for a favorable review of one of the several advertised to help me decide. I was especially interested in the Nuevo kit as it advertised no soldering. At last our chapter secretary received a catalog of FOG Library Disks from Dave Blair, where a small review on the 80 column upgrade reported favorable results. The next day I called in my order.

Within the week, I received my kit, second day UPS label shipment. The kit was complete with the basic tools, a very easy to read and understand instruction booklet with clear photographs, and all necessary hardware. Having some experience with micro electronics, I waited for the weekend to arrive so that I could borrow a static free mat from a local electronics shop. The mat is not an absolute, but the anti-static cautions given in the front of the instructions must be completely observed. With the static free mat in hand I proceeded to follow the instructions very carefully.

The modification was quickly and easily installed without any soldering. The only extra tool required was a 1/4" drill to put the video jack mounting hole in the front plastic cover.

I had one performance problem. After the kit was installed, I was unable to "dim" the built-in screen to off. In fact, its lowest intensity position was so bright it distracted my vision from the external monitor. A call to Nuevo put me in touch with a patient and knowledgeable engineer/technician, Al Jan. After I explained my problem, he informed me of exactly what was wrong, a resistor with too high a value. He offered to either replace the board or allow me to modify my board with his instructions. Al told me that R14 on the Nuevo board was a 1000 ohm resistor and that it should be 500 ohms. I bought five 100 ohm resistors from the local Radio Shack for $0.39 and soldered a couple of them in parallel to the original Nuevo R14. Everything worked just fine. Nuevo says they have made a change in the kit boards so that they now come with the lower value resistor. The original condition of the Osborne components is still in tack and the upgrade with its modification can be removed to restore the Osborne to its original state.

Once the upgrade is installed the original SYSGEN, SETUP, and COPY programs must be replaced with new ones provided by Nuevo. These work exactly like the originals. A nice extra, was the inclusion of a program similar to XDIR, called SD.COM. It works just like XDIR but has a plain english summary at the end which tells you how many files you have and how much disk space is free.

The default cursor is a blinking underline. It was a little distracting at first, but I have now gotten use to it. The Nuevo ads might lead you to believe that you can choose one of several cursor options; none, fast blink, slow blink, steady underline, or block. The necessary technical information is provided in the instruction booklet for an experienced assembly language programmer to write a routine to enable the different cursor modes. I do not have this experience yet, so I asked Nuevo about this when I called about the intensity problem. I was informed that in the near future I would receive a software disk with a program that would allow me to pick the cursor of my choice from a menu. I haven't received the disk as of this writing, but will update this review when I do. In the meantime I'm studying Waite's and Lafore's ***Soul of CP/M*** and trying to figure out my own ASM routine.

There are a couple of other features that I should mention. First, the kit provides a new CBIOS ROM, Rev 1.4+. It works fine, but does not have a call for autostart. The familiar logon box is gone and replaced by a simple typed message. After typing the first carriage return you are taken directly to the prompt, A>. Second, the instruction booklet warns of screen hash during refresh or update. I do have some hash, especially during the loading of Wordstar files, but it is very rapid, of low intensity, and doesn't interfere with any operation of the programs. Finally, the kit, allows you to choose any combination of 52 or 80 column display between the built-in and external monitor. I chose 80 on both. The built-in monitor displays the 80 columns quite nicely and I do not have any problem reading a full screen. People with eye problems may want to keep the 52 columns on the built-in. Since the kit provides a new character generator and does not merely squeeze the old characters I recommend that the 80 column be tried before opting to leave 52 on the small screen. When the 80 column is chosen for the built-in monitor, you lose the contrast control. The instructions state that this is preset for optimum contrast. I always like to set features for my optimum and not what someone else likes. In this case though, the contrast is excellent, and I find that between the normal Osborne brightness control and the bright and contrast controls on my external monitor that I have as much control over the range as I did before.

In general I am very pleased with the product and its performance. I heartily recommend this upgrade. I feel that anyone can safely and easily install the upgrade if they take their time and follow the clear step by step instructions and check their work against the pictures in the instruction booklet. The manufacturer support has been excellent.

Nuevo 80 Column Display

Setup	**Good**
Ease of use	**Excellent**
Performance	**Good**
Documentation	**Excellent**
Serviceability	**Excellent**

* * * * * * *

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SOFTWARE REVIEWS

TURBO PASCAL
Software Review and Bug Report

by Charles Sauer

Turbo Pascal is an integrated compiler and editor sold by Borland International, 4807 Scotts Valley Drive, Scotts Valley, Ca 95066. It is available for CP/M 2.x (Z-80 only), Apple CP/M, MS-DOS, PC-DOS and CP/M-86 machines in a number of formats. There are some differences in the implementations. When speaking to the firm who is handling Borland's phone orders, they informed me that only 1.3x and 1.4x ROM machines, of the various Osborne 01 versions, were supported. The package sells for $49.95 mailorder from Borland.

Editor

The most noticable feature of this package is its toggle capability between editor and compiler. When booting up, the user has 11 options; (L)og disk drive, specify the (W)ork or (M)ainfile, (E)dit, e(X)ecute, (C)ompile, (D)irectory, (R)un, (Q)uit, (S)ave or specifying one of three compiler (O)ptions. The editor has Wordstar-like commands with 38 different commands. This includes 14 cursor movements, 9 insert and delete commands, 8 block commands and 8 others including Find, Find and Replace, etc. Perhaps the most interesting command is ^Q^L -restore line. As long as the cursor has not left the line you can redo. The editor works well with the exception of several minor bugs — more on that later. Since the editor and the compiler work on source code when in memory, there is a limit to the length of the program (22.5-23.1K). However, a compiler directive (include) can be used to merge source code during compile. In addition, programs can be chained or executed so that the size limit of a program is limited more by disk space and memory stack. The editor is installed when first booting up the program. Some 30+ terminals are supported. In addition, the user can specify terminal characteristics so custom installation is possible. Use of Turbo's editor is optional — Wordstar or some other editor can be used, although less conveniently.

Programs / Files

Borland advertises that Turbo occupies 28K with a 8 bit machine and 33K of disk space with 16 bit. With my issue, Turbo can occupy 28K but 31K is more convenient (error messages, etc). Actually my copy came with 19 files on 2 SS disks, occupying 170K. The install package, TINST is 3 files with 31K. Microcalc (MC), a spreadsheet written in Pascal, occupies 11 files and 82K. MC includes source code, instructions, help files, etc. While MC is not as flexible as Supercalc or Visicalc, it is a functional spreadsheet that is a good introduction to Pascal and Turbo. One nice undocumented program is TLIST, a program that will list Pascal source files with the option to print line numbers and/or underlining reserved words.

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Documentation

Turbo is furnished with a soft-bound 254 page 5 x 8 inch reference guide. Since there are differences in the implementation of CP/M-80, CP/M-86 and MS-DOS, the are seperate sections for each in the appendix. The guide is well written with plenty of detail and only a few mistakes and typos (ERROR.DOC corrects some of those). An index and a table of contents, a necessity for a beginner, is included. The style is terse as a reference manual should be. There are only a few examples of programs. The supplying of Microcalc's source code does help. Since there are a number of unique features with Turbo, a user's guide or something similar, with plenty of examples, would be a benefit. To be fair, $50 gets quite a bit. The documentation although professional is no substitute for a textbook in Pascal. Borland has done an excellent job with documentation.

Speed

Borland has advertised their compiler in ***Byte*, *Microsystems***, etc., with some fast compile and execute times. In the ad they quote a 1 sec. compile and link time for Turbo, while IBM PASCAL and PASCAL MT+ are quoted at 97 and 90 seconds, respectively. The benchmark is Wirth's Eightqueens in *Algorithms + Data Structures = Programs*. The execute times are 2.2 for Turbo, 9 and 3 for IBM and Pascal MT+. Using an Osborne 01 my times were as follows:

Load Turbo	8 s	Load Eightqueens	2 s
Compile (memory)	1 s	Compile (.COM file)	5 s
Execute (memory)	6 s	Execute (.COM file)	18 s

The .COM file operations involve reading and writing to disk. By contrast JRT Pascal Ver 3.0 compiled (.INT file) in 77 sec. and executed in 85 sec.

For a novice like myself, this difference in speed is a significant feature. Lets say a 50 line Pascal program is typed in with three simple typos such as omitting semicolons or the misspelling an identifier. With Turbo's ability to find the error at compile (hit "esc" to enter edit), and the toggle ability to immediately compile and run the program after editing, it is possible to fix the three mistakes in 15-20 seconds, assuming that one can identify them easily. There are 78 error messages with some accompanying explainations as to the cause(s) of the error. This amounts to having the immediate run-time advantages of an intepreter with the run-time speed of a compiler. I rate this feature as Turbo's strong point.

The source code for Eightqueens occupies 1K of memory and 8K compiled, for a total of 9K. With JRT (same source code) the intermediate code occupies 1K. This is typical overhead storage requirements when compiled programs are involved. This can be inconvenient when many, short Pascal programs are stored on disk. Since the source code can be compiled so quickly, it is useful to store on disk only the source code and to compile and run in memory only — at least for programs which are run infrequently.

Runtime and License

Turbo's compiler produces immediate run-time code without the necessity of an intermediate p-code like JRT PASCAL or CBASIC. This speeds up program execution at the cost of additional disk storage. Any program compiled can be run without Turbo being present. However, Borland has a clause in their license agreement that anyone who distributes a program for use on a different machine not specified in the agreement must pay an extra $100 for an unlimited license. Since the necessary run-time code is included in the program, this is reasonable for those who have commercial aspirations. However, I question the wisdom or the practical necessity of introducing this restriction on public domain programs. Jerry Pournelle in February's ***Byte*** addresses this issue more eloquently. Perhaps Borland, in the future, will drop this public-domain restriction. [*I believe that Borland has indeed dropped this policy. David*]

The ability to correct run-time errors also exists. When a run-time error is encountered (when run in memory after compile), the program counter displays where the error occurred and the error number. Hitting "esc" puts you back into editor at the point in the source code where the error was detected. There are 10 run-time messages and 14 Input/Output (I/O) messages. Correction of these errors can be more time-consuming of course, because the errror may not be readily apparent. The immediate call-up ability to the editor is a nice feature.

Compiler Options

With CP/M-80 there are 9 compiler directives. The directives are included in source code in braces. They include control of; I/O mode, control character interpretation, I/O error handling, run-time index checks, type checking, user interrupts, array optimization, generation of non-recursive code and level of nesting of WITH statements. The 16 bit options have some differences from the 8 bit package.

Compilance with "Standard Pascal"

By and large, Turbo is a superset of Wirth's language definition. The major differences are as follows:

The standard I/O operators GET and PUT are not supported. Extensions to WRITE, WRITELN, READ and READLN are used for I/O instead. Borland claims faster I/O, reduced space overhead and a more versatile operators. The price to pay for this, of course is reduced portability with other compilers.

Dynamic variables and pointers use the standard procedures NEW, MARK and RELEASE instead of NEW and DISPOSE. A GOTO statement cannot leave the current block. PAGE is not implemented.

Strings are supported (dynamic) and their length must be declared. The type BYTE is a subset of integer, is logically one byte in length and can be in the range of 0 to 255. The reserved word PACKED is accepted by the compiler but has no effect. The operators PACK and UNPACK are not supported. Procedures and functions cannot be passed as parameters.

There are 43 reserved words. Those additions to Wirth's definition are:

ABSOLUTE
EXTERNAL
INLINE
SHL
SHR
STRING
XOR

There are 91 standard identifiers. They are used to define types, constants, variables, functions and procedures. Those not defined in Wirth's definition are:

ASSIGN	AUX	AUXINPTR	AUXOUTPTR
BLOCKREAD	BLOCKWRITE	BUFLEN	BYTE
CHAIN	CLOSE	CLRSCR	CON
CONINPTR	CONOUTPTR	CONCAT	CONSTPTR
COPY	CRTEXIT	CRTINIT	DELLINE
DELAY	DELETE	ERASE	EXECUTE
FILEPOS	FILESIZE	FILLCHAR	FLUSH
FRAC	GETHEM	GOTOXY	HEAPPTR
HI	HIGHVIDEO	IORESULT	INSLINE
INSERT	INT	KBD	KEYPRESSED
LENGTH	LO	LST	LSTOUTPTR
MARK	MEM	MEMAVAIL	MOVE
NORMVIDEO	PI	PORT	POS
PTR	RANDOM	RANDOMIZE	RELEASE
RENAME	ROUND	SEEK	SIZEOF
STR	SWAP	TRM	UPCASE
USR	USRINPTR	USROUTPTR	VAL

Space limitations prevent explaination of each identifier. Use of these identifiers give Turbo powerful implementation capabilities at the cost of portability. If the purpose of acquiring this package is to learn Pascal or to implement programs that are to be used on Turbo compatible machines, then these features are of great value. Considerable modifications may be necessary.

Bugs

I have noticed two bugs associated with the editor. In setting up (initializing) the editor with TINST.COM, I was unable to format the screen properly with the default settings used by TINST for the Osborne. The proper way to format the screen was to use the Osborne settings but to answer Yes when asked if modifications were necessary. I then hit return for each question asked except for <column first?>. Answering Yes and letting the installation package format the installation data file worked the first time. This initial difficulty may be attributed to an error by Borland or to the my use of an Osborne with the 80 column option (Screen-Pack). Some investigation and experimentation on my part would have prevented this from being much of a problem. A call to Borland was useful in correcting this bug.

A bug more persistant occurs when using the editor in the overwrite mode (^V toggle). Occasionally, hitting return will leave the cursor at the end of the line. Apparently the line feed is disabled. It is necessary to hit ^N then return in order to get to the next line. The bug disappears when the insert mode is chosen. This is not a serious bug, but can get in the way. Any explanations Borland? Overall I found this an excellent piece of software, well worth the price. It is far superior to the only other Pascal compiler that I am familar with, JRT Pascal. Of course, being in the public domain, JRT has quite a price advantage over Turbo. The flexibility of Turbo and its price make it an ideal package for those who wish to use Pascal on their machines and who are unwilling to pay the $300-$700 commonly charged for similar packages. This is the direction that computer software should be heading.

[*Charles wrote this in Feb. '84. Borland International is now selling version 2.0 and ver. 2.0 upgrades for ver. 1.0. The bugs that Charles found may have been fixed. David*]

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ADDRESS BOOK

by Byron Davies

This program, by ESCAPE ENGINEERING, 2536 S. Diamond, Santa Ana, CA 92704, was originally offered with the name CONTACT! It is a simple system for entering and retrieving personal, business, club, and similar categories of names, addresses, and phone numbers.

It has three advantages over similar programs I've seen: first is the price of $29.95; second is its Sort function; and third is its ability to print selected listings in different formats such as telephone directories, mailing labels, or fanfold lists of all entries either sorted or unsorted.

ADDRESS BOOK is written in CBASIC and runs quickly, although sort time naturally gets longer as files grow longer. Entry structure is fixed, but should accommodate most users: Business, Last Name, First Name, Spouse's Name, Unit # (meaning apartment, suite, &c), Street, City, State, ZIP, Home Phone, Work Phone, Category, and Notes. Omitting one or more of these fields doesn't introduce corresponding blank lines on the printout. Records can be sorted by any of the entry fields; the Category entry permits sorts by any user-selected coding of from 1 to 5 letters, numbers, or characters, so you can keep business contacts separate from your computer club and your Christmas card list. However, the individual who is both a business contact and a member of your computer club must either be listed once in each category or you must code a separate category for all those who are in both sets. Not too difficult, really, particularly because ADDRESS BOOK is very easy to edit and modify, although each entry must be done individually, with no "global" changes possible. It's also best not to show an individual's home address and include a business connection as incidental information; the printout would be Joe Blow, IBM, 123 Main St, Anyburg, CA 99999. The Notes entry is for items that are not to be printed. Similarly, don't list a spouse whom you don't want on the address label. Also, mailing labels can only be printed one across.

cont. on page 35

CALENDAR

Under this heading you will find the listing of activities and events of Affiliated Member Organizations. Listings are the responsibility of organization officers. Officers must have corrections into FOG office by the first of the month prior to publication (August 1st for the September issue). For a list of other groups, see ***"CONTACTS"*** later in this issue, in back issues starting January, 1983, or send a stamped, self-addressed envelope to the FOG offices. Please include a note with your geographical area.

Day	Date	City	A.M.O.	Time	Address	Contact No.
1st Su	Aug 5	Syracuse, NY	82-SOUP	1:00pm	Location Varies — Confirm	315-471-1405
1st M	Aug 6	Oberlin, OH	9-^Ob^Os	7:00pm	Rice Faculty Lounge, Oberlin College	216-775-8290
	Aug 6	Milwaukee, WI	22-MilwOG	7:00pm	Engin & Math Science Bldg. Rm E495, Univ. of WI	414-691-4241
	Aug 6	Jackson, MS	58-MCPM	6:00pm	R & D Center, 3825 Ridgewood Rd,, 5th Fl Conf Rm.	601-366-0928
	Aug 6	Menlo Park,CA	68-SMOG^3	7:30pm	Crane Place, 1331 Crane	415-326-2543
	Aug 6	Tacoma, WA	72-TOG	7:00pm	Pierce Co. Library (Basement Mtg Rm) 404 Garfield So.	206-752-5582
	Aug 6	Bloomington, IN	87-IOU	7:30pm	Indiana Univ, Jordon Hall, Room 440	812-339-4754
	Aug 6	Capetown, South Africa	96-COGSA	57:30pm	Meladata Solutions, Strand 55	021-25-6182
	Aug 6	Wiesbaden, Germany	24-AGOG	7:00pm	Air Force Hosp. Bld. 24 Rm. 100	069-69-3218
	Aug 6	Baton Rouge, LA	103-FLOG	7:00pm	B.R. School of Computers, 9255 Interline Ave.	504-292-1880
	Aug 6	Winston-Salem, NC	107-TROGIC	7:30pm	CONFIRM	704-246-5929
1st Tu	Aug 7	Santa Maria, CA	42-SMOG	7:00pm	Allstate Savings & Loan, 401 South Broadway	805-937-1128
	Aug 7	Oakwood, OH	79-DOUG	7:30pm	St. Paul's Episcopal Church, Dixon Ave.	513-932-6990
	Aug 7	Tempe, AZ	100-TOG	6:40pm	Tempe Public Library, Southern Ave @ Rural Rd	602-438-2731
1st W	Aug 1	Stockton, CA	11-SOG	7:00pm	Allen's Computerland 4343 Pacific Ave.	209-475-8440
	Aug 1	Sacramento, CA	61-SOG	7:00pm	SMUD Training Bldg, 1708 59th St	916-422-3260
	Aug 1	Enid, OK	77-FOG/E	5:30pm	706 W. Maine	405-233-9103
	Aug 1	Rockford, IL	84-GROG	7:00pm	Rock Valley College, Student Center Rm 134	815-398-1280
1st Th	Aug 2	Santa Clara, CA	1-1st FOG SV	7:30pm	5201 Patrick Henry Drive (loading dock entrance)	415-371-8699
	Aug 2	Denver, CO	4-DOG	8:00pm	Masonic Temple, 3550 Federal Blvd.	303-759-0359
	Aug 2	Dhahran, Saudi Arabia	33-DPoG	10:00am	ARAMCO Mgmt Training Center	874-4798
	Aug 2	W. Lafayette, IN	34-HOG	7:00pm	CONFIRM	317-743-5275
	Aug 2	Auckland, New Zealand	53-NZOG	7:30pm	20 Kingsley Avenue	659-738
	Aug 2	Santa Rosa, CA	56-No. Bay FOG	7:00pm	Valley Oak Park Rec Hall, 2600 Northcoast	707-546-0145
	Aug 2	Sitka, AK	83-BUG	7:30pm	Human Services Center, Moller Dr.	907-747-5372
	Aug 2	Westmount, PQ	73-Microcozm	6:45pm	Hillside Armoury, 3 Hillside Lane	514-849-7761
	Aug 2	Wellington,New Zealand	109-CROG	7:30PM	Compusales,75-77 Ghuznee St.	0064-4-791-172
each Th	Aug 2	Orlando, FL	16-GOOUG	7:00pm	Room 203 Orlando College, Lee Road	305-847-7031
2nd Su	Aug 12	Miami, FL	26-GCOUG	1:00pm	F.I.U Tamiami Campus, Building DM, Room 100	305-251-7666
	Aug 12	Amarillo, TX	28-POG	2:30pm	Downtown Branch Amarillo Public Library	806-355-7509
	Aug 12	Ketchikan, AK	89-KCPM	4:00pm	320 Bawden Suite 101	907-225-6476
2nd M	Aug 13	Fayetteville, AR	23-AFOG	7:00pm	Alternates between Ft. Smith — CONFIRM	501-575-2980
	Aug 13	Fresno, CA	35-FROG	7:00pm	Village Computer Sy stems, 3081 W. Bullard	209-222-2233
	Aug 13	Evansville, IN	46-E-OSBUG	6:30pm	Oaklyn Branch Evansville Library, Oakhills & Lynch	812-479-5108
	Aug 13	Edmonton, Alb	45-KOG	7:30pm	Alberta Vocational College, 10215 - 108 Street	403-459-0416
	Aug 13	Toronto, Ont	49-TASOFOG	7:00pm	CONFIRM	416-889-2072
	Aug 13	Charlotte, NC	71-LOGIC	7:30pm	CONFIRM	704-377-1154
	Aug 13	Calgary, Alta	94-COUG	7:30pm	931 - 32nd Ave NE	403-297-6281
	Aug 13	Paris, France	110-OUF	6:00pm	Metro Falguiere, 10 Rue Falguiere	548-39-61
2nd Tu	Aug 14	Ames, IA	12-Midwest FOG	7:00pm	IA State (old engineering annex) W. Lincoln Way	515-266-8764
	Aug 14	Memphis, TN	15-MOG	7:00pm	34th Fl., Clark Bldg., Federal Express Conf. Rm	901-767-2350

Continued next page

Day	Date	City	A.M.O.	Time	Address	Contact No.
2nd Tu	Aug 14	Mill Valley, CA	31-MOG	7:00pm	West America Bank, Strawberry Village	415-892-2713
	Aug 14	Lincoln, NE	39-Lincoln LOG	7:30pm	Smith Curtis Bldg., NE Wesleyan Univ., 52nd & St. Paul	402-472-1392
	Aug 14	Omaha, NE	44-OACP/MUG	7:00pm	CONFIRM	402-348-0440
	Aug 14	London, Ont	95-LOG	7:30pm	Elborn College, Room 2116	519-434-4842
2nd W	Aug 8	Oakland, CA	3-East Bay FOG	6:00pm	B & B Electric, 2832 Ford Street	415-834-7897
	Aug 8	Vancouver, BC	17-VPCC	7:30pm	Hastings Community Center, 3096 East Hastings	604-298-6990
	Aug 8	Danbury, CT	40-DOG	7:00pm	Preferred Utilities Mfg, 11 South St	203-792-7959
	Aug 8	Clayton, MO	55-SLOG	7:00pm	Mid County Library, Central & MD	314-862-6239
	Aug 8	Oklahoma City, OK	67-OKLOG	7:00pm	3400 N.W. Grand Blvd	405-843-5925
	Aug 8	Cleveland, OH	75-COG	7:00pm	Trinity Cathedral House, East 22nd & Euclid Ave.	216-871-2532
	Aug 8	Athens, GA	81-COG	7:30pm	Athens Federal Savings, Barnett Shoals Road	404-353-2127
	Aug 8	W. Hempstead, NY	88-LION	7:30pm	Adelphi Univ Cont Ed Ctr, Eagle Ave	212-327-2321
	Aug 8	Johannesburg, So Africa	90-JOG	7:30pm	GBS Bldg — Wang Auditorium	011-51-6304
	Aug 8	Jacksonville, FL	98-JOUG	7:00pm	JEA Bldg, 233 W. Duval Street	904-771-3427
	Aug 8	Ithaca, NY	101-FLOG	7:30pm	Cornell Univ, 694 Uris Hall	607-257-2030
2nd Th	Aug 9	Davis, CA	6-DOG	7:30pm	CONFIRM	916-756-2967
	Aug 9	Sioux City, IA	38-SOG	7:30pm	Western Iowa Tech., Room 508	712-252-2182
	Aug 9	Modesto, CA	48-Tule FOG		CONFIRM	209-578-4909
	Aug 9	Medford, OR	54-RVOG	7:30pm	33 No. Central #306	503-482-8646
	Aug 9	Ft. Lauderdale, FL	91-FLOG	7:00pm	Harris Comp Sys, 2101 W. Cypress Creek	305-748-7237
	Aug 9	St. Paul, MN	111-TCOG	7:00pm	Univ. of MN,St. Paul Campus Rm B-45	612-379-2517
alter Th	Aug 9	Maitland, FL	20-CFIOG	7:00pm	Lake Faith Villas, Maitland Blvd	305-298-8576
each Th	Aug 9	Orlando, FL	16-GOOUG	7:00pm	Room 203 Orlando College, Lee Road	305-847-7031
2nd F	Aug 10	Salinas, CA	5-MBAOCUG	7:00pm	Castroville Fire Station, Speegle & Pomber	408-449-4021
	Aug 10	Chatsworth, CA	86-ONUG	7:00pm	Wizard of OsZ, 9614 C Cozycroft Ave	818-709-6202
2nd Sa	Aug 11	Bangkok, Thailand	36-CP/M BUG	1:00pm	Action Computers 5/26 Saladaeng Road, Silom	391-0963 x86
	Aug 11	Louisville, KY	64-PCC	1:00pm	Univ. of Louisvile, Shelby Campus, Rm 202 Burhans Hall	502-423-0451
	Aug 11	River Grove, IL	80-CFOG	1:00pm	Liberal Arts Bldg, Triton College	312-654-0986
	Aug 11	Houston, TX	108-CLOG	9:00am	Gilruth Rec. Center, Johnson Space Center	713-554-4304
3rd M	Aug 20	Raleigh, NC	8-ROCC	7:30pm	CONFIRM — Dreyfus Aud., Research Triangle Inst.	919-782-9576
	Aug 20	Wenatchee, WA	10-WOG	7:00pm	Computer Systems Marketing,1030 North Wenatchee	509-884-3279
	Aug 20	Detroit, MI	14-DeFOG	7:30pm	Ford Tech Center Cafeteria, 1700 Rotunda Dr, Dearborn	313-422-0928
	Aug 20	Anchorage, AK	63-GLOB	8:30pm	Anchorage Comm. College, 2nd Floor — Bldg K	907-277-0950
	Aug 20	Menlo Park, CA	68-SMOG[3]	7:30pm	Crane Place, 1331 Crane	415-326-2543
	Aug 20	Marietta, GA	93-GROG	7:00pm	Georgia Tech, Cobb County Research Fac.	404-422-6416
3rd Tu	Aug 21	Cincinnati, OH	27-COG	7:00pm	Central Trust Center 6th floor, 5th & Main Streets	513-232-4076
	Aug 21	San Luis Obispo, CA	47-CCOG	7:00pm	Chris Jespersen School, 251 Grand Ave.	805-466-8311
3rd W	Aug 15	Austin, TX	7-AEIOU	6:30pm	Old Quarry Library off Far West Blvd.	512-837-7539
	Aug 15	Oak Ridge, TN	13-SMOG	7:30pm	ECS 136 Fairbanks (**OR** 11505 Kingston Pike, Knoxville)	615-482-7919
	Aug 15	Las Vegas, NV	25-VOG	6:00pm	Las Vegas Library, 1726 East Charleston	702-452-2544
	Aug 15	Humboldt, CA	29-HOG	7:00pm	Room 126 Science Bldg., Humboldt State	707-445-2074
	Aug 15	Dunbar, WV	59-Valley FOG	6:30pm	Dunbar Public Library	304-727-6436
	Aug 15	Walnut Creek, CA	60-Mt. DOG	7:00pm	SF Federal, 1660 Olympic Blvd, Diablo Rm	415-933-2665
	Aug 15	Kaiserslautern, W. Ger.	62-FROG	7:00pm	Vogelweh Recreation	49-6371-52364
	Aug 15	Midway, WA	99-SKOG	7:30pm	Highline Comm. Coll, Gold Rm — Bldg 4	206-941-2192
	Aug 15	Tarrytown, NY	104-	7:00pm	Tarrytown Public Library, N. Broadway	914-747-2110
3rd Th	Aug 16	Santa Clara, CA	1-1st FOG SV	7:30pm	5201 Patrick Henry Drive (loading dock entrance)	415-371-8699
	Aug 16	Provo, UT	30-KAOS	8:00pm	Wiltec Research Co. 488 South 500 West	801-225-8293
	Aug 16	College Station, TX	43-AGGNOG	5:30pm	A & A Building, Texas A & M Univ.	409-845-5814
	Aug 16	Ann Arbor, MI	37-TOGA[2]	7:00pm	Neuro Science Bldg. Univ. of MI, 1103 East Huron St	313-662-9026
	Aug 16	Tulsa, OK	51-OUT	7:00pm	Micro Systems, 2010 South 68th East Ave	918-584-5610
	Aug 16	Richmond, VA	52-CVOG	7:00pm	Red Cross Bldg, 4th and Main	804-270-9404

Continued next page

Day	Date	City	A.M.O.	Time	Address	Contact No.
3rd Th	Aug 16	St. Croix, VI	70-StCOUG	7:30pm	College of the Virgin Islands	809-773-7551
	Aug 16	Garden City, NY	88-LION	7:30pm	Control Data Ed Ctr, 1325 Franklin Ave	212-327-2321
	Aug 16	Lemoyne, PA	92-MIDPOG	7:30pm	One Stop Computer, 65 N. 5th St	717-732-2937
	Aug 16	Salt Lake City, UT	105-SMOG	6:00pm	Master Mind Computers, 448 S. 400 E	801-268-2831
each Th	Aug 16	Orlando, FL	16-GOOUG	7:00pm	Room 203 Orlando College, Lee Road	305-847-7031
3rd F	Aug 17	Houston, TX	76-OUCH	7:30pm	Univ. Houston, 101 Farish Hall, KIVA Rm. (Use lot 13A off Cullen)	713-688-8149
	Aug 17	Woodland Hills, CA	106-TUG-NET	7:00pm	Home Federal Savings, Canoga Ave at Oxnard	818-994-6567
3rd Sa	Aug 18	Kenai, AK	18-PenFOG	10:00am	Room V111, Kenai Peninsula Comm. College	907-262-5801
	Aug 18	Norfolk, VA	78-TOG	9:00am	Armed Forces Staff College, Hampton Blvd	804-495-1596
	Aug 18	Lexington, KY	32-KOG	12:00n	Room 128, Erickson Hall, University of Kentucky	606-623-1884
4th Su	Aug 26	Amarillo, TX	28-POG	2:30pm	CONFIRM	806-355-7509
	Aug 26	Pittsburgh, PA	50-TROG	2:30pm	Mellon Science Building, Duquesne Univ.	412-456-3946
4th M	Aug 27	Mill Valley, CA	31-MOG	6:30pm	CONFIRM	415-892-2713
	Aug 27	Davenport, IA	102-QCOG	7:00pm	CONFIRM	319-386-3484
4th Tu	Aug 28	Wichita, KS	21-OPEK	7:30pm	St. Paul's Methodist Church, 13th & Broadway	316-945-8389
	Aug 28	Greenville, SC	41-POGO	6:30pm	C. Douglas Wilson, 201 E. North Street	803-233-3434
	Aug 28	St. Louis, MO	55-SLOG	7:00pm	Thornhill Library, 12863 Willowyck	314-862-6239
4th W	Aug 22	Danbury, CT	40-DOG	7:00pm	Preferred Utilities Mfg, 11 South St	203-792-7959
	Aug 22	Portland, OR	57-PMS	7:00pm	Bonneville Power Admin. Aud.	503-642-9692
	Aug 22	Athens, GA	81-COG	7:30pm	Athens Federal Savings, Barnett Shoals Road	404-353-2127
4th Th	Aug 23	San Francisco, CA	2-SF FOG	7:00pm	St. Aidan's Church, Goldmine & Diamond Hgts.	415-334-285
	Aug 23	Lancaster, PA	74-LOG	7:30pm	Fire Protection Sys, 1873 Lincoln Hwy East	717-898-8929
alter Th	Aug 23	Maitland, FL	20-CFIOG	7:00pm	Lake Faith Villas, Maitland Blvd	305-298-8576
each Th	Aug 23	Orlando, FL	16-GOOUG	7:00pm	Room 203 Orlando College, Lee Road	305-847-7031
last Su	Aug 26	River Grove, IL	80-CFOG	1:00pm	Liberal Arts Bldg, Triton College	312-654-0986
last Tu	Aug 28	Santa Barbara, CA	69-OSBUG	7:30pm	SB Planning Rm, 105 E. Anapamu St	805-687-8541
	Aug 28	Kansas City, KS	97-MIZOG	7:00pm	TWA Bldg, 13th & Baltimore	816-455-2824
last W	Aug 29	Richland, WA	19-TROG	7:00pm	1776 Fowler	509-375-3258
????		Schweinfurt, W. Ger.	112-SWOG		CONFIRM	09721-68064
????		, CA	65-ENROBSO		By arrangement only — CONFIRM	408-458-9047
????		Sierra Madre, CA	66-SMOG		By arrangement only — CONFIRM	818-355-8825
????		Jakarta, Indonesia	85-JOG		By arrangement only — CONFIRM	021-333-880

MOVING?

Please help the ***FOGHORN*** move with you.
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AUGUST 1984

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

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The manual is clear and complete, covering the elementary necessities for the beginner but allowing more experienced users to skip directly to operating procedures. The manual specifies the minor differences between running on the O-1 and on the Executive. The back cover even lists the standard two-letter abbreviations for States.

ADDRESS BOOK is not a full relational database management system, but it's effective, fast, and inexpensive. Its limitations are not crippling or intrusive, error-trapping is good, and the menus don't need constant backup from the manual.

Byron Davies is the President of San Francisco FOG, an Affiliated Member Organization. SF FOG meets the 4th Thursday of each month at St. Aidan's Church, corner of Diamond Heights Blvd. and Goldmine Drive.

* * * * * * *

Grafiks

Review by Tony Casilio

If you are in the market for a graphics package for your Osborne 1 or Executive that will produce high resolution bar, pie and line graphs, there are not a large number of packages to choose from. However, there are a few very good programs available, such as Grafiks, by Robonics (936 Hermosa Ave., Hermosa Beach, CA. 90254). It offers many useful features, such as the capacity to accept input data from a large number of data base and spreadsheet programs, 'previewing' graphs on the screen, a large number of labeling options, and a relatively low price tag ($125.00). It is not, however, without its faults — it suffers from very poor error trapping, and a few options are guaranteed to drive the user crazy while attempting to get them to operate correctly.

Robonics offers two versions of Grafiks for the Osborne: one for the Osborne 1, and another for the Executive (versions are also available for the Kaypro II, 4 and 10 and the Morrow). There are a few differences in the command structure between the two. Therefore, as this review concerns the Executive version, not all of the features (or limitations) listed may be applicable to the Osborne 1, KayPro, or Morrow versions.

The three types of graphs that can be produced are as follows:

(1) Scatter plots — There is a maximum of 200 points per plot, albeit plots may be superimposed with the "overlay" option so as to allow for (hypothetically) an unlimited number of points. Data points can be either actual data, or an algebraic formula may be used to generate the points. The point symbol can be 1 of 4 types: plus, square, cross or none. In addition, you have the option of connecting the points together with a line (NOT a regression line) or leaving them separated as a scatter plot. The axis can be marked with tick marks or a grid which 'overlays' the plot.

(2) Pie charts — The number of slices can range from 2 to 20, and any number can be 'exploded'. The diameter of the pie may range from approximately 2 inches to about 6 inches.

(3) Bar graphs — The number of bars is limited to 52; each bar can have from 1 to 6 variables. In addition bars can be clustered into logical sets which are adjacent to one another.

When Grafiks is run, you are presented with a main menu which allows you to either create a graph, or erase, label, overlay, display or print a previously defined graph. The program has the unfortunate habit of sounding the bell when it is time to make a choice. Due to the fact that one returns back to the main menu after every operation, this beeping can (and does) become rather annoying.

Creating a graph is very straightforward and simple. You are presented with another menu which asks the manner of data entry (more on that later), file name for the graph, size of the graph and type. The size option allows four choices ranging from 80 columns by 60 rows, to 110 columns by 90 rows. Only sizes 1 or 2 are permissible on an 80 column printer.

The next menu presented will differ depending on the type of graph selected. For example, if the bar graph option is chosen, the next menu asks for the number of bars, number of variables per bar, etc.

Data entry for each particular graph is an area in which this program excels. Data can be entered 'by hand' at the time of creation of the graph, or the data can be plucked from a whole host of programs, including DBase II, SuperCalc, Personal Pearl, WordStar, Perfect Calc and Perfect Filer (latter two for Kaypro users). In addition, instructions are included for data input from CBasic and MBasic programs. The instructions are a bit on the terse side, but they are accurate. I had little or no problems sending data from all of the above listed programs to Grafiks. It is also a very easy matter to enter data by hand at run time.

The time required to compute a graph is dependent on a number of factors, such as number of data points, etc. Generally expect to wait a minute or two for simple scatter plots, and up to 5 minutes for pie charts with a large number of slices. Printing time is again dependent upon the complexity of the plot -- a minute or two for simple scatterplots, and up to 10 minutes or more for complex bar charts (times are for an Epson FX-80). Dot matrix printers supported are Epson (with Graftrax), C. Itoh, IDS, NEC and Okidata.

Once the graph is produced you can display it on the screen, either in "condensed mode", which puts the full graph on one screen, or in "full mode", which splits the graph over a number of screens. The number of screen for the latter option is dependent upon the size option chosen in an earlier menu. High resolution portions of the graph are displayed in the graphics characters of the Osborne. Therefore, while you cannot see exactly what will appear on the hardcopy, you get a pretty good idea of the appearance of the plot.

Another option which is available is the "label" option. The manner in which this part of the program operates, however, can drive the user stark raving mad. For example, labels entered in the 79th column of the screen will print on the 80th column of the hardcopy. Labels placed in the 80th column of the screen can cause some VERY odd looking graphs! I do not

⇨

mean to imply that this option is inoperable, but rather that it takes a bit of trial and error in order to label a graph the way you wish it to appear. On the plus side, there are a large number of labels to choose from, including arrows, various mathematical symbols and a number of shading patterns.

Perhaps the most serious problem with Grafiks is error trapping — it has none whatsoever. When an error condition is encountered, such as a syntax error in the wording of an algebraic formula to produce a scatter plot, command drops to the operating system and a message such as "error D7 at PC 04C1H" is displayed. No data is lost; in several deliberate attempts by myself to crash the program, I have never had to rekey any data. This comes in very handy, due to the fact that it can take several attempts to track down where you have made your error on account of the criptic error messages.

The user manual is a 57 page softcover 'pamphlet' sized document. For the most part it is well written. The style is terse, but the material is generally covered in sufficient detail. There is an index as well as a table of contents.

In conclusion, if you are looking for a graphics package for your computer, take a long look at Grafiks. In spite of its quirks, I have found it to be a very useful and easy to use program.

* * * * * * * *

SYSTEM NOTES

WordStar and the Mannesmann Tally 160L

by Jim Enright

After purchasing a MT 160L dot matrix printer, I spent considerable time trying to get what I considered a satisfactory installation of the printer's features into WordStar. Since WordStar can use only a few of the printer's functions, it becomes quite a chore to decide which features to use and which not. I used Worstar's installation program several times, trying to find a combination of features that I liked, with less than satisfactory results. Finally, in desperation I called Mannesmann Tally. They sent me a 12 page application note

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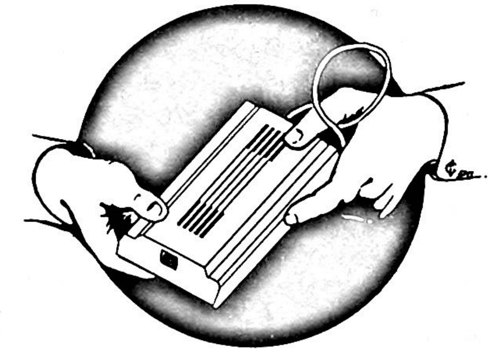

TECHNICAL SUMMARY

1200 Baud, Bell 212A compatible
(120 characters per second)
0-300 Baud, Bell 103/113 Compatible
(30 characters per second)
Full Duplex/Half Duplex (Local Echo)
Direct Connection to Phone Lines via RJ11C standard phone jack, FCC certified
Auto Dial, with customer software for Osborne computers
Auto Answer
Manual Originate
Manual Answer
Auto Mode Select
Auto Speed Select
Audio Phone Line Monitor
DTR Override
RS232 pins 2&3 reversible
Pilot Light (LED)
RS232 Interface cable included
Power Supply included
Phone Cable included
Transmit Level — 9 dBm
Receive Sensitivity — 48 dBm
Dimensions: 4.4" x 6.4" x 7.4"

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for using the 160L with the Osborne computer. Included in the application note was a suggested installation procedure for WordStar. I found this installation procedure to be unsatisfactory also. However, I did get some ideas from the application note that lead, finally, to a copy of WordStar that I liked. I now have a copy of WordStar that can use all of the printers features, with the exception of dot addressable graphics. Now I can use proportional spacing, auto right justification, alternate character sets, etc. etc. You will find below a list of the WordStar patches I used. If you don't know how to incorporate these patches, you will find a lot of help in past issues of the ***Portable Companion*** and in previous issues of this newsletter. Also consult the Osborne manual. Feel free to contact me if I can be of help.

You will note one of the patches will cause ^PA (Alternate Character Set) to send only the <ESC> character to the printer. This is the method used to send lesser used escape character sequences to the printer. For example: to enable math symbols, Greek letters and line graphic characters, follow the ^PA with 9z. This method should be used only after the rest of your document is complete, because WordStar will take these extra characters for part of your text for reformatting commands etc.. Be aware that use of this method may cause surprising results, because the printer does not operate exactly as described in the printer manual.

Use ^PT to start superscript and ^PV to end it. Use ^PV to start subscript and ^PT to end it. Use ^PY as a toggle for proportional spacing. Use ^PQ to turn on auto right justification and ^PW to turn it off. Other print codes are described below.

The exact method for the many possible applications for WordStar using these patches is too extensive to describe here. I will instead try to describe the application I use the most, generating personal letters:

1. First we must have the printer "D" codes enabled. The way to do this is to use the procedure in the printer manual for programming the printer from the front panel, i.e., hold the Yes switch down and press the No switch and then use the Yes and No switches to answer the questions the printer asks. From then on the "D" codes will be enabled when you turn the printer on. By the way, when the "D" codes are enabled the printer defaults to the correspondence mode. This is not explained in the manual.
2. Obviously, if we wish the printer to do any page formatting, we cannot have WordStar doing it also, so these WordStar features must be turned off. Toggle right justification off with ^OJ. Set the right hand margin to column 0 with the dot command .PO 00 at the beginning of your text.
3. We need to send the printer an initialization string to set the left and right columns. This can be accomplished either with the WordStar INSTALL program or with the SETUP program that comes with the double density Osborne. I prefer to use SETUP and the initialization string: 1B,5B,38,3B,37,32,73 to set the left column at position eight and the right at 72.
4. Now generate your text headings or any text you wish to have centered by WordStar using the default right margin of 65. Then change the right margin to 75 (^OR75). Put a ^PY and a ^PQ at the beginning of your text to enable proportional spacing and right justification.

This method produces very nice correspondence quality print, proportionally spaced and right justified with the spaces all the same width on each line for a very pleasing letter. You may also wish to use ^OS2 for double spacing your letter.

PATCHES:

Label:	Address	Value	
PALT	06B5	1	(ESC)
	06B6	1B	
PSTD	06BA	4	10 Pitch WP
	06BB	1B	
	06BC	5B	
	06BD	34	
	06BE	79	
ROLUP	06BF	2	Superscript
	06C0	1B	
	06C1	44	
ROLDOW	06C4	2	Subscript
	06C5	1B	
	06C6	55	
USR1	06C9	4	Auto right just
	06CA	1B	
	06CB	5B	
	06CC	38	
	06CD	79	
USR2	06CE	4	Auto right off
	06CF	1B	
	06D0	5B	
	06D1	3A	
	06D2	79	
USR3	06D3	4	10 cpi draft
	06D4	1B	
	06D5	5B	
	06D6	30	
	06D7	79	
USR4	06D8	4	WP mode
	06D9	1B	
	06DA	5B	
	06DB	31	
	06DC	79	
RIBBON	06DD	2	Prop space
	06DE	1B	
	06DF	50	
RIBOFF	06E2	2	Prop space off
	06E3	1B	
	06E4	51	

[*Bob Thomson sent us this article from the* TOGGLE, *the newsletter of the Tacoma Osborne Group, Tacoma, WA*]

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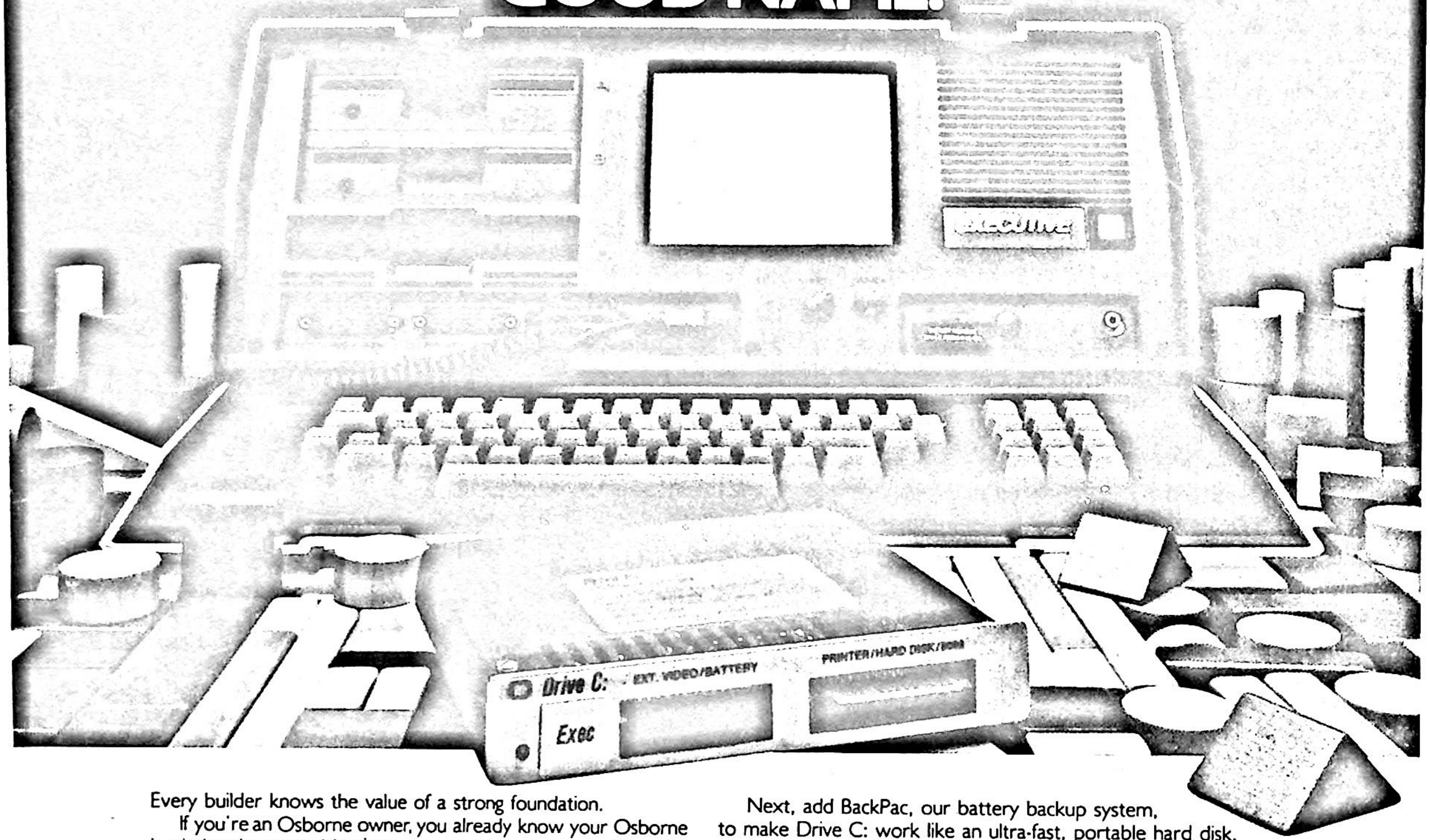
BUILD ON ITS GOOD NAME.



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Compiling JRT Pascal on Osborne Single Density

by Bob Thomson

A problem arose with JRT Pascal that we had not anticipated. If you have a single density Osborne and have tried to compile a program you may have run into this. We didn't realize this problem existed since we had the double density upgrade.

The compiler consisting of:

```
JRTPAS3.COM (22K)           PASCAL3.INT (10K)
PASCAL0.INT (24K)           PASCAL4.INT (4K)
PASCAL1.INT (8K)            PASCAL.LIB (14K)
PASCAL2.INT (6K)
```

totals to 88K using almost all of the space on a 90K single density disk. The problem is that when compiling a Pascal source program on disk B, temporary files are created on Drive A, but since there is so little room an error message is displayed indicating insufficient disk space.

This can be overcome by making more room available on the compiler disk by transferring one or more of the bigger files from Drive A to Drive B. Quoting from the manual on page 6 "... These modules must be present on your disks when using the compiler or run-time system. The modules need not all be on the A disk. They may be on either the A: or B: disk, the Pascal system will automatically locate them."

We formatted two disks in single density and put the compiler programs (above) on one disk except for PASCAL.LIB. We pipped PASCAL.LIB to the disk containing the source program in Drive B. We then tried to compile a short program it worked OK with the single density disks. Transferring JRTPAS3.COM to Drive B will also work. We have not tried moving any of the others.

If you have a single density machine and have been frustrated by this problem, try this solution. It should work.

[*Bob Thomson sent us this article from the* TOGGLE, *the newsletter of the Tacoma Osborne Group, Tacoma, WA*]

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A DDT Hint, Revisited

by Robert Docken

re: Brian Rau, "A DDT Hint."

Brian Rau's use of the little equation to determine the number of "pages" of memory to be written to the disk using the SAVE command of CP/M [***FOGHORN***, DEC.'83, pg. 31] appears correct, but it only works for that particular example, or any other number of pages less than 0A hex or 10 decimal.

Example 1 - Consider the following:

You Type **DDT EXAMPLE.COM** ↩ , and DDT responds with:

```
DDT VERS 2.2
NEXT PC
A030 0100
```

A030H - 0100H = 0930H

and

0930H/0100H = 9.3

per Rau.

The decimal notation is normally an abbreviation for a division by a power of ten, not a power of 16. You could interpret the notation as a division by a power of 16, but we're looking for something simple, not complex. One could use the decimal remainder only to indicate something larger than 9, viz., 9.3 > 9.0, but that is unnecessarily imprecise, and could lead to misunderstanding. Let's just stay completely away from fractions. You can do this by rounding up the third place of the hex number, then dividing by 0100H, or 256D.

Note that, in this case, Rau is correct. A **SAVE 10 EXAMPLE.COM** will, in fact, capture the entire program to a disk file EXAMPLE.COM.

Example 2 - Now, consider this, for modifying DBII:

You Type **DDT DBASE.COM** ↩ , and DDT responds with:

```
DDT VERS 2.2
NEXT PC
4700 0100
```

4700H - 0100H = 4600H

and

4600H/0100H = 0046H

But 46 is much less than the 70 "pages" of memory that DB.COM requires you to save to capture the entire program. Take a look at some of the DBII patches that have appeared in ***FOGHORN*** at various times. Note that if you convert 46H to decimal, the result is 70D, which is the number you need to correctly SAVE your program. The following explains why this is true.

The Correct Technique is as Follows.

Example 1:

You Type **EXAMPLE.COM** ↩ ; DDT responds with:

```
DDT VERS 2.2
NEXT PC
A030 0100
```

A030H - 0100H = 0930H

Line by line,

0 256x16 = 16x16x16 = 16(third power)9 256x1 = 16x16 = 16(second power)3 256/16 = 16x1 = 16(first power) 0 1 (ones column) = 16(zeroth power). First, round up the third place to the next digit if the first two digits are greater than 0. For example,

0900H rounds up to 0900H (i.e. no rounding needed)
0A31H rounds up to 0B00H
0930H rounds up to 0A00H
45B0H rounds up to 4600H, and so forth.

⇨

Now, CP/M requires that you SAVE programs from memory in "pages" of 256 bytes, so division by 100H (=256D) gives it to you immediately. But the SAVE command requires a number in decimal. Returning to the examples above:

0900H/0100H = 09H = 09D => 9 "pages"
0A00H/0100H = 0AH = 10D => 10 "pages"
0B00H/0100H = 0BH = 11D => 11 "pages"
4600H/0100H = 47H = 70D => 70 "pages"

A good deal of the confusion arises from the SAVE command syntax that requires a decimal number, so you must remember to convert the third place and higher to decimal, i.e., 46H = 70D, or 0AH = 10, as shown in the above table. If you **SAVE 10 A:EXAMPLE.COM**, you will write the first 9 groups of 256 bytes, plus one extra group of 256 bytes to include the extra 48 (3x16) bytes remaining.

Once you get used to the idea, you can get it immediately, "by observation." Once you have rounded up the hex number, look to the third place or higher, which represents the second power of 16 (256) and higher places. These digits translate immediately into a number of CP/M "pages" to SAVE, since they represent multiples of 256.

Example 2 - Now, consider again, for modifying DBII:
You Type **DDT DBASE.COM**⊃ ; DDT responds with:

```
DDT VERS 2.2
NEXT PC
4700 0100
```

4700H - 0100H = 4600H

Line by line,

4 256x16 = 16x16x16 = 16(third power)6 256x1 = 16x16 = 16(second power)0 256/16 = 16x1 = 16(first power) 0 1 (ones column) = 16(zeroth power).

For this example, no rounding is needed since zero occupies the first two places.

4600H/0100H = 46H = (4x16+6)D = 70D = 70 "pages"

The entire command would be: **SAVE 70 DBASE.COM** ⊃.

Remember, the key to this whole procedure is that CP/M requires you SAVE programs in blocks of 256 bytes, and hex numbers are powers of 16. This method might appear complex, but some practice makes it effortless, and it is completely reliable. If you're gonna mess around with DDT, you gotta know some stuff about hex numbers and CP/M. There is simply no other way.

* * * * * * *

Rejuvenating Fabric Printer Ribbons

by Frank Dunaway

Under Executive Library News in the March issue of ***FOGHORN***, Jim Switz described a process to rejuvenate continuous loop fabric printer ribbons. Jim credits Gale Rhoades and Jim Woolley with the tip. Because this was carried in the Executive Library News, many people who don't have an Executive probably didn't see it. I have rewritten it, slightly, to a step-by-step procedure:

Rejuvenating Fabric Printer Ribbons

1. Open top of cartridge. Be careful not to turn the cartridge over as the folded ribbon may fall out. [*for other than folded ribbons, you'll have to experiment*]
2. Carefully spray ribbon with WD-40 lubricant, available from any hardware store. Don't overspray.
3. Let sit for a few hours or overnight.
4. Replace top of cartridge.
5. Run a page or so of "test pattern"
6. Reuse the ribbon. When the print gets light again,
7. Repeat the process up to 4 or 5 times!

At $7.00 to $12.00 per ribbon, depending on where you buy them, this can cut your ribbon cost substantially, maybe enough to pay your FOG dues for next year!

Thanks, Jims and Gale!

[*There are several people writing warnings about WD-40, residue build-up on the print head and pins. I have also heard from several people that have been using WD-40 for long periods of time with no problems. This sounds similar to the "flippy" diskette controversy. Time will tell (maybe). David*]

* * * * * * *

Word-Pac's FOOTNOTE with the Epson Printer

by Keith Conover, M.D.

About six months ago, I bought the Osborne Word-Pac, and since then I've used both Spellguard and Grammatik extensively.

I decided to use FOOTNOTE for a 10-page paper a few months back. After some fumbling, it worked out well. However, I left the manual on one of the wards one night, and it disappeared. (What use would it be to someone without the program?) Just recently, I decided to try to get the program running again, and by experiment, managed to figure out how to set it up again. I did some playing around with FOOTNOTE's assignment of control characters, because I use several control characters (e.g. ^Y,^E, ^R, ^Q, and ^W) for special Epson MX-100 printer functions. Unfortunately, these control characters would be interpreted erroneously by FOOTNOTE, ending up with some very strangely modified text files. I found I could leave out all the print control characters until I was finished with FOOTNOTE, but looked for something more satisfactory. I won't go into all the problems I discovered, but I will describe the setup that works best for me:

1. Note symbol: stays as @
2. Call option and
3. Style: your choice
4. Footnote rule character: ^G
5. Control char. replacing note call: ^FK
6. End of text control char.: ^O
7. Lines per page: your choice.

The characters ^F, ^G, and ^O are seldom used in most WordStar files, and are fairly innocuous if left in place: on the Epson printer, ^F works as a space, ^G as a backspace, and ^O as a non-break space. The end result is to move your footnote rule up a line, and to insert a space before each footnote call. However, I set up the Special Function Keys (SFK) to clear the remaining ^F and ^G characters from the text file. (The ^O is removed during the FOOTNOTE formatting operation. This use of ^O is deliberate, because if you try to remove ^O's with WordStar ^QA 'find and replace' function, very strange things happen.) Here is the SFK definition:

```
^QA^PF↩↩GN
↩^S^QA^PG↩
↩GN↩^S
```

This will find and remove all the ^F and ^G characters in the file; the ^S's tell WordStar to do it quickly without showing the process on the screen (it takes only a second or so even for a long file).

I also like to print with the Epson emphasized mode, which I turn on with ^E and off with ^R. Unfortunately, I have to turn off the emphasized mode before each superscript and back on afterwards. This is a lot of work to do manually, so I set up more SFK's to help:

```
SFK #2: ^QA^PT↩^PR^
PT↩G↩
```

This allows me to selectively replace the first superscript character (^T) of each footnote call or group of calls with ^R^T, which turns off the emphasized mode.

```
SFK #3: ^QA^PT↩^PT^PE
↩G↩
```

This allows me to selectively replace the LAST ^T of each call or group of calls with ^T^E to turn the emphasized mode back on. This is quite complex and convoluted, I realize, but after you get it set up it works quite well. (If you're tight for SFK space, try leaving out the last ^P in each SFK listing.)

As a final note, I'd like to point out a deficiency of FOOTNOTE: it doesn't allow the easy use of multiple calls to the same footnote, such as I did with the calls for footnote 1 in this sentence. (No, don't bother looking at the bottom of the page.) If anyone comes up with an easy way of doing this, please let me (and everyone else) know by writing in to the ***FOGHORN***.

Thanks for all the good information I've gotten out of the ***FOGHORN*** thus far.

Keith Conover is a Resident Physician with the Department of Internal Medicine at the George Washington University Medical Center, located in Washington, DC

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Using BASCOM (Microsoft BASIC Compiler)

by Dan Glisson

If you have MBASIC programs which are used a lot, especially in a business environment, you should think about compiling them with Microsoft's BASCOM. Copies are now available to FOG members at attractive prices directly from what's left of OCC.

We purchased our copy of BASCOM over a year ago. We paid more money back then, but it's been well worth it. Compiled MBASIC programs run many times faster than the corresponding programs running in the interpreter. They can be invoked directly from the A> prompt, so your inexperienced operators needn't learn anything about MBASIC. And more Osborne RAM is available for the program's storage requirements.

The documentation we received with BASCOM was complete, dense, and organized about as well as the early Osborne manuals. The software came on two single-density disks and included several files for special applications and demonstrations. Here are the files I copy from the distribution diskettes to the system disk I use for software development:

BASCOM.COM
BASLIB.REL
BCLOAD
BRUN.COM
CREF80.COM
L80.COM
LIB80.COM

There is enough room left over on a double-density diskette for MBASIC itself, so I add that along with my favorite utilities and a simple SUBMIT file (COMP.SUB, described later):

COMP.SUB
COPY.COM
DDT.COM
MBASIC.COM
PIP.COM
SETUP.COM
STAT.COM
SUBMIT.COM
SYSGEN.COM
XDIR.COM

This leaves about 12K available on the system disk, which will be placed in the A: drive. I use the disk in B: for the program under development and its associated data files, but the extra 12K on the A: drive is useful for keeping an updated backup copy of my brainchild. A system disk with these files can be used to write and interactively debug MBASIC programs in the usual way, then process them into .COM files which run directly from CP/M.

While you are using the MBASIC interpreter to create your masterpiece, remember that a few things will be different in the compiled version.

For one, your program will execute much faster. While this is almost always a benefit, a do-nothing wait loop which pauses the proceedings will produce a much shorter pause in the compiled version.

Control-C will be processed the same as any other character. This makes it possible to create a bulletproof program for novice users, but it also means that you must make sure your program comes to a logical END. Otherwise, once your

⇨

program starts to run, only a front-panel RESET will stop it. When the compiled version encounters the END statement, it returns to CP/M.

If an error is encountered--for instance, the operator tries to initiate a read operation from a non-existent file--the compiled program will report the error and return to CP/M. There is no reasonable way for a novice operator to retry the input unless you make careful use of ON ERROR constructions.

Some MBASIC features operate differently in the compiled version of your program. To be honest, I haven't figured out how to make COMMON work properly, although CHAIN seems to be fine. I've found a few other minor things which are different, and the documentation points out the obvious things which are meaningless in the compiled program, such as LIST or EDIT.

If your program loads text from a disk file into a large array variable, for example, the interpreted version may pause occasionally, and for ever-lengthening periods, for a process which the MBASIC documentation calls "garbage collection." You'll be happy to know there are no such pauses in the compiled version.

To use BASCOM, you first need an ASCII disk file of a program written in the MBASIC convention. If you use MBASIC to debug and SAVE the program, remember to use the ,A option of SAVE. The command:

```
SAVE "B:MYPROG",A
```

tells MBASIC to create on the B: disk an ASCII text file (not in the usual compressed format) named MYPROG.BAS. If you use WordStar to enter and/or modify the program, use the non-document mode (press N from the no-file menu) and don't use control B or word wrap. The filename should have the .BAS extension.

Once you are back to the CP/M system, you would ordinarily invoke BASCOM and L80 to process your .BAS file into the compiled and ready-to-run .COM version of your program. This could involve a bit of typing if you're really getting your money's worth out of the compiler, so a SUBMIT file is highly recommended. Use the non-document mode of WordStar to create a file called COMP.SUB containing the following three lines:

```
;COMPILE and LINK B:$1.BAS
BASCOM =B:$1/E
L80 B:$1,B:$1/N/E
```

When you are ready to compile your program (B:MYPROG.BAS, for example), just invoke SUBMIT from the CP/M prompt:

```
A> SUBMIT COMP MYPROG
```

In this example, MYPROG is substituted for $1 in the command lines contained in COMP.SUB. First, the screen displays a comment to announce what's happening:

```
A>;COMPILE and LINK B:MYPROG.BAS
```

Then BASCOM is invoked in the required form:

```
A>BASCOM =B:MYPROG/E
```

BASCOM will read B:MYPROG.BAS and create a file called B:MYPROG.REL. We use the /E switch because the error-trapping in our programs uses the ON ERROR GOTO and RESUME <line number> construction.

Finally, the L80 linker is invoked in its own quirky syntax to read the .REL file and create the final executable file, B:MYPROG.COM:

```
A>L80 B:MYPROG,B:MYPROG/N/E
```

Again, certain switches (/N and /E) are selected here in order to obtain the most straightforward operation.

The whole process of compiling and linking takes two minutes or more. If your program contains fatal errors, BASCOM will report them. This will happen spectacularly if you ask BASCOM to compile a program which was SAVEd from MBASIC in the compressed format, rather than in the ASCII format produced by the ,A option of MBASIC's SAVE.

To test your program, just invoke it from the CP/M prompt. In this case, you would type

```
A> B:MYPROG
```

The program immediately calls the "runtime module" BRUN.COM from the logged drive (in this case, A:) and executes. Naturally, if you decide to change something, you must modify your .BAS file and go through the compile/link process again.

When you are satisfied with your creation, you can copy it onto working software disks. Each .COM program takes up about as much disk space as the original .BAS program. All your .COM programs produced this way share BRUN.COM, which must be on the logged disk. For simplicity, we put all our homebrew software, BRUN.COM, WordStar and CP/M on the same disk. That's the disk we boot from in drive A: and which remains in A: most of the time.

If you plan to sell or otherwise transfer your software, remember that BRUN.COM remains the intellectual property of Microsoft. Each of your customers can purchase a copy from Microsoft, or else special licensing arrangements must be made. Alternatively, you can link your program in such a way that BRUN.COM is not necessary; the resulting .COM file, however, takes up much more disk space.

[*Dan Glisson is Director of the WGBH Caption Center in Boston, MA. Dan says that seven (7) Osbornes are used to prepare closed captions for the benefit of the hearing-impaired viewers of nationwide public television. The captioning for PBS programs is prepared using WordStar and homebrewed programs; the latter compiled using Microsoft's BASCOM.*]

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WordStar Tip

When you make a mistake in the NAME OF FILE TO EDIT, you do not have to rub it out a letter at a time. Instead, you can delete all that has been written, just by hitting the down arrow.
Dave J. Bridges

* * * * * * *

Proportional Spacing With the Diablo 630 Using WordStar

by Don M. McLaughlin

Here's a scheme to make your Diablo 630 do nifty proportional spacing, creating the prettiest text this side of typesetting. This same idea will create variable pitch non-proportional print, microjustified.

The secret is the program DIABLO.COM which allows setting of the margins on the 630. These printer margins determine the length of the printed line. The length of the WordStar RULER line determines the number of CHARACTERS to be placed within the printer's set margins.

Sorry, It ain't free. Proportional print looks really good only when you use a proportional spacing (PS) printwheel. They are about $50. each. If you are going to spring, let me suggest the Xerox Roman PS wheel. This combination together with your mailing database will produce a form letter that no one will suspect was not individually typed. I've had clients ask where they could buy such a beautiful typewriter. When your form letters get READ and get RESULTS your money has been spent wisely!

The first step is to assemble all the programs you will need on a special diskette with system tracks.

WS.COM (Unmodified by ANY add-ons like Math)
All the WordStar overlay programs, including mergeprint.
DIABLO.COM

If you are a double density user the following can fit on the main diskette:

INSTALL.COM
SETUP.COM

Run INSTALL. When asked if you want a normal first time installation: answer **N**.

When asked for filename of WordStar to be installed answer: **WS.COM** if WordStar and Install are on the same drive or **B:WS.COM** if you are running Install on A: and WordStar on B:.

Next Install asks "filename for saving installed WordStar":. It is possible to have several versions of WS.COM on the same disc all sharing the same overlay files. I keep three versions. One version with the Diablo installed as a standard daisy wheel (option E), one with the installation described here, and one version for my IDS prism. I name the standard daisy version DSTD.COM, this version DPRO.COM and the version for the dot matrix printer IDS.COM.

Name this version with any filename that you wish. Be sure to specify the drive name B:filename.extension if WordStar is being installed on drive B:

When you see the terminal choice menu answer **U** for unchanged and **Y** for Yes.

Next Install will present a printer menu. Choose oprion **C**, a TTY-like printer that can backspace.

Specify **none** for communications protocol.

When asked if modifications are complete answer **N** for no.

Enter the following values by typing the label or address of the function changeable by the user. When entering labels be sure to follow the label with a colon. Addresses do not require colons.

Entries here are shown in "shorthand", separated by commas. In Install type **LABEL:** ↵ , INSTALL will reply with a new line showing the address, old value, and a blank space for a new value. Enter ONE value of the string shown below on a separate line. Follow each value with TWO carriage returns, except only ONE carriage return for the last value in the string.

SHORTHAND LABEL & VALUES	USE THIS	DOES THIS FUNCTION
PALT:03.1B.1E.07	(^PA)	Sets print line to 8 lines/inch.
PSTD.03.1B.1E.09	(^PN)	Sets print line to 6 lines/inch.
ROLUP:02.1B.44	(^PT)	Superscript negative half line feed.
ROLDOW:02.1B.55	(^PV)	Subscript half line feed.
USR1:01.1B	(^PQ)	Issues Escape Character
USR2:03.1B.1F.0B	(^PW)	Sets spacing to 12 char./inch.
USR3:03.1B.0D.50	(^PE)	Printer Remote Reset
USR4:	(^PR)	Left open for HexPrintR
RIBBON:02.1B.41	(^PY)	Red Ribbon Toggle
RIBOFF:02.1B.42	(^PY)	Black Ribbon Toggle

NEXT TWO FOR SCREEN PAC USERS ONLY (USING MONITORS)

WID:67	Sets Flag line column 104
INITRM:66	Sets Ruler line 103 columns

And then:

ITITOG:00	Insert defaults to OFF

Following are addresses, use no colon after.

037E 00	Sets WS page offset to zero
0386 00	WS Justification Default OFF

Exit INSTALL
Run SETUP.COM

Set Printer Standard Serial or Diablo Xon/Xoff
Set Baud 1200
Set Arrows WORDSTAR
Set Scroll ON (for 52 column users)
Set Scroll OFF (for screen pac users)
Set Screen size 104 (for screen pac users)

Set Special Function Keys:

0	DIABLO↵	:Access margin setting program
1	^PQ	:Sends Escape Code
2	^PQE	:Enable Continuous Underscore
3	^PQR	:Disable Continuous Underscore
4	^PQM	:Enable Auto Justify
5	^PQ=	:Enable Auto Center, ↵Clears
6	^PQO	:Enable Bold Printing
7	^PQW	:Enable Shadow Printing
8	^PQ&	:Quit Bold or Shadow Printing
9	^PQX	:Cancel all commands except Proportional Spacing

Save Setup on New WordStar Disk. Press **RESET** and **RETURN** to read setup information into memory.

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Manual Commands:

^1P	Enable Proportional Spacing
^1S	Return All Spacing to Switch Default Setting
^19	Set left margin at print head position
^10	Set right margin at print head position

Now program the operator:

ALWAYS compose text with WordStar word-wrap turned ON and WordStar Justification OFF.

When composing text set the WordStar ruler line (the right margin (^OR)) for about 20% more spaces than normal at 10 pitch for the most pleasing results. (a 6.5 inch print line will need WordStar's right margin at 80.)

When composing headings to be centered, compose them against the left margin, they will be printed centered, by the PRINTER. Example:^PQ=PRINTED CENTERED HEADING^PQ&

Forget using the normal WordStar ^OC print command which centers text, use instead the command above.

When text is to be printed justified to the right margin, place the control code for auto justify (^PQM or ^4) preceding the first line of text or at the beginning of the first line of text. If auto justify is not turned on the printer will ignore its right margin setting and print whatever line length is sent to it by WordStar with a ragged right edge. It's a good idea to turn auto justification off at the end of a document which has been justified. Use (^PQX or ^9). This code should be placed on the line below the end of text.

HINT #1: In auto justify mode, print density (in characters per inch) will be equal to the line length in inches (set by DIABLO. COM) divided by the number value of WordStar's right margin (the R on the ruler line). The printer prints this text micro-justified. This allows print pitches which are almost infinitely variable. Usable ratio is from 10 cpi to 15 cpi.

HINT #2: Beware of paragraph last lines approximately 5/8 filled. This will result in 5/8 line being spread across entire line. Try to compose text so that paragraph last lines are less than half filled or nearly filled.

PROPORTIONAL spacing may be used with or without auto justify. Control codes are used the same way as for justify and may be grouped with the justify codes. The proportional spacing mode defaults to 12 characters per inch, so at least this many characters should be sent from each WordStar composed line. Capital letters on proportional wheels are very fat and it is possible to overcrowd a line that is all capitals. Usually even a full line of capitals will fit at 12 cpi.

PRINTER MARGINS are set from the no-file menu. Make sure that the printer is turned on. Use the R option and when asked for name of command press ^0. The program DIABLO.COM will load and ask you for the left margin setting and the length of print line. After returning to the no-file menu, press the printer platen knob inward and adjust paper so that top of form is at the top of the ribbon. This is by far the best method of setting printer margins as it allows several different documents to be printed or merge-printed without resetting margins.

Margins may also be set from the document its self. Using this method merge-printing without specifying mailmerge to wait for paper changes between documents is not possible. The margins get all goofed up. To setup margins during document composition, place the reset code (^PE) in the first column of the first line of the document following any dot commands. On the next line use the space bar or tab key to space inward the number of spaces required for the left margin and type ^19 then advance the cursor the number of spaces desired for the print line length and type ^10. In this manner the document will set it's own margins as it begins to print.

Notes

Installing WordStar for 104 column screen offsets page numbering. For letters I usually turn page numbers off with the .OP command. If page numbering is desired set each document with a .PCnn where nn is equal to 1/2 the WordStar margin setting.

Superscripts and Subscripts are accomplished by half line platen roll and are not as attractive as 3/48 line roll provided when WordStar is installed for a Daisy Wheel printer.

This document is meant to be printed for your reference by WordStar BEFORE this installation is accomplished. A sister document called DIABLO.PRN is provided to be printed after installation is made as a check on performance. DIABLO.PRN should be printed with the newly installed disk and with a PS print wheel installed in the printer. Print wheel changes also require changing the left hand rotary switch to match the wheel used.

DIABLO.DIR is a file you may print as a reference card for the new in-document control codes to be used with this scheme.

PAGE.COM is a program which sets the Diablo 630 page length to any number of lines you wish. This allows you to use form feeds with WordStar when printing on non-standard (not 11") paper. It is not a really useful program used with WordStar, but for use with other programs like DataStar that use form feeds for page ejection it's the berries.

DIABLO.COM and PAGE.COM are written in CBASIC COMPILER. I have included the source code for DIABLO.COM, DIABLO.BAS so that it may be easily transmitted by modem.

[I have sent DIABLO.COM, BAS, PRN, DIR, DOC (the original of this article) and PAGE.COM to the FOG Disk Library. David]

* * * * * * *

Osborne I and SuperCalc with Okidata Printers

courtesy of Okidata

This user Tip will assist you in using Supercalc (Osborne I) and the Okidata Microline 82A, 83A, 92, 93, and 84 Step II Printers. Please use this as a guide; you may wish to use other printer features than those explained in this document.

Normally, the Supercalc set-up function allows the user to send printer control codes directly to the printer. Unfortunately, the control codes required for many of the Microline functions cannot be sent directly to the printer (condensed mode for example). This is because certain characters are not keys on the key board. To compensate for this, the numeric keys are also known as the function keys. An article in the April/May ***Portable Companion*** (authors Don Ross, Gary Cuevas/Reprograming The Function Keys Using DDT) explains using the DDT program to reprogram the function keys. This User Tip is an extension of that article, and has been written in a format for configuring the function keys with Microline Printers.

Configuring The Osborne I And The Okidata Printer

The Okidata User Tip #3073 explains how to interface the ML-92, 93, and 84 Step II Printers with the Osborne I. Both parallel and serial connections are described. The Okidata User Tip #2022 explains how to connect the ML-82A and ML-83A to the Osborne I. Although only the serial connection is explained for the ML-82A and 83A, they may also be connected in parallel. If you have not been able to interface your printer and your Osborne I, you may request these from Okidata Corporation. User Tip #3073 also contains information about configuring Wordstar to utilize the advanced features of our printers, such as correspondence mode.

Programming The Function Keys

After a backup of the Supercalc disk has been made, put the master Supercalc disk in a safe place. Never use your master disk for anything other than making backup disks. Your Osborne Manual explains how to make a backup disk.

Steps For Making Supercalc Disk:

1. Place the backup of Supercalc in Drive B and the backup CP/M utility disk in Drive A, press the reset switch, and then boot CP/M. The system will prompt with "A>" when CP/M is active.
2. Type: (bold characters are typed by the user)

A> **PIP B:=A:PIP.** ↵ Note: ↵ is the Return Key

This command copies the file.

PIP.Com from Disk A to Disk B. This file will be needed later.

Now type:

A> **DIR B:** ↵ Note: ↵ is the Return or Enter Key

```
DIR
B:  SC        COM  :  SC        OVL
B:  SC        HLP  :  INSTALLS  COM
B:  BALANCE   CAL  :  BARRIER   CAL
B:  BRKEVN    CAL  :  PIP       COM
B:  AUTOST    COM  :  XDIR      COM
```

This will display the directory of disk B, which should be similar to the directory above. Note, the PIP.Com is now on the disk.

3. Remove the Supercalc backup disk from Drive B.

Insert a blank, unformatted disk in Drive B.

Type:

A> **Copy** ↵

The program will ask you if you wish copy or format the disk.

Select format by typing F when the Osborne displays:

`Press C to Copy. F to Format. or Return to exit.`

The Osborne will then require you to select which Drive you wish to use. Select Drive B. The Osborne may then ask you the type of disk to format (single or double density). Select S or D depending on what type of disk you have (single or double density).

When the formatting is done, exit back (with a ↵) to CP/M. The system will prompt:

A>

4. The system is in the CP/M command mode.

Type:

A> **DDT** ↵ This loads the debug program.

The Osborne will respond with:

-

Type:

-D000 ↵

The screen will display a list of Hex numbers:

```
0000 C3 03 E5 . . . . . . B10S 1.3
               or
0000 C3 03 E1 . . . . . . B10S 1.4
```

If you have E5 at location 0002, you have BIOS 1.3. If you have E1 at location 0002, you have BIOS 1.4. You don't need to know what BIOS is, just which one you have.

Type:

^C Exit the DDT program. — (^C is the control key and C key simultaneously)

The Osborne will enter the CP/M command mode again.

A>

5. **BIOS 1.3 changes.**

Use Step 5 only if you have BIOS 1.3. For BIOS 1.4, use Step 6.

Type:

A> **MOVCPM 60 *** Move CP/M Command.

`Constructing 60k CP/M vers 2.2`

`Ready for ''SYSGEN''` or Osborne Displays

`''Save 39 CPM60.COM''`

A> **SAVE 39 B:CPM60.Com** ↵ Save CPM to the new disk

A> **DDT B:CPM60.Com** ↵ Loads CPM from the new disk (Drive B) into the Osborne memory and runs the DDT program.

`DDT Vers 2.2` Osborne responds with this display

```
Next PC
2800 100
```

Type:

-S2012 ↵ Function Key

- 2012 30 1E ↵ 0

- 2013 31 1C ↵ 1

- 2014 32 1D ↵ 2

- 2015 33 36 ↵ 3

- 2016 34 38 ↵ 4

- 2017 35 31 ↵ 5

- 2018 36 30 ↵ 6

- 2019 37 1B ↵ 7

- 201A 38 1F ↵ 8

- 201B 39 . ↵

- **^c** (Control C, Exit DDT)

➪

```
   A> SYSGEN ↵
Operating System Generation Program
         Osborne Revision 1.5
Source Drive (A or B) ↵ (This reads the system from memory)
Destination Drive (A or B) B
Destination Drive (A or B) ↵ (This exits the SYSGEN program)
   A>
```

Proceed to Step 7.

6. **BIOS 1.4 Changes.** Use Step 6 only if you have BIOS 1.4. Type:

```
   A> MOVCPM 59 * ↵ Move CP/M Command.
Constructing 59k CP/M vers 2.2
Ready For ``SYSGEN`` or Osborne Displays
   ``Save 39 CPM 59.COM``
A> SAVE 39 B:CPM59.COM ↵ Save CPM to the new disk
```

A> **DDT B:CPM59.COM** ↵ Loads CPM from the new disk (Drive B) into the Osborne memory and runs the DDT program.

```
   DDT vers 2.2 Osborne responds with this display
   Next PC
   2800 100
```

Type:

```
   -S2025 ↵ Function Key
   - 2025 30 1E ↵ 0
   - 2026 31 1C ↵ 1
   - 2027 32 1D ↵ 2
   - 2028 33 36 ↵ 3
   - 2029 34 38 ↵ 4
   - 202A 35 31 ↵ 5
   - 202B 36 30 ↵ 6
   - 202C 37 1B ↵ 7
   - 202D 38 1F ↵ 8
   - 202E 39 . ↵
 - ^C (Control C, Exit DDT)
   A> SYSGEN ↵
 Operating System Generation Program
          Osborne Revision 1.5
 Source Drive (A or B) ↵ (This reads the CP/M from memory)
 Destination Drive (A or B) B (Puts CP/M on Drive B)
 Destination Drive (A or B) ↵ (This exits the SYSGEN program)
   A>
```

Proceed to Step 7

7. Remove the CP/M utility disk from Drive A. Insert the Supercalc backup disk with the PIP.COM file. (Generated in Step 2)Type:

A> **PIP B:=A:*.*** ↵ This command copies all files from Drive A to Drive B

When all files have been copied, the CP/M prompt will be displayed.

```
   A>
```

8. Remove the disk from Drive A and place the disk from Drive B in Drive A. This disk (new disk in Drive A) is your new working copy of Supercalc.
9. Press the reset button, and boot the new Supercalc disk.

Testing Your New Supercalc Disk

Your Disk should boot and display the Supercalc worksheet (after you see the ↵ to start the program). Load the example "Balance" which should be on your disk. Please refer to your Osborne Manual for instructions on how to use Supercalc.

Key to Type	Result (Display)
/	Displays the command string B,C,D,E,F,G,I,L,M,O,P,Q,R,S,T,U,W,X,Z
L	Load
Balance ↵	Loads Balance Asks for A(ll) or P(art)
A	Select A for all Loads File

Once the file has been loaded, we may now use our new function keys to control the printer.

Printing normal spread sheets (Example 1)

Key to Type	Result
	Command line displayed
/O	Output command D issued Select D for display
D	Display command issued, Enter coordinates
A1:G25 ↵	Device displayed Select printer
P	Spread sheet printed (Example 1)

When done, a ↵ will return you to the spread sheet.

Printing Condensed Spread Sheets (Example 2)

This example shows how to print in condensed mode. This example is also printed on the ML-92 at 17 CPI. On the 82A, the printout will be slightly different because the ML-82A condensed mode is 16.5 CPI.

Key to Type	Result
	Command line displayed
/O	Output command D issued. Select D for display
D	Display command issued, Enter coordinates
A1:N25 ↵	Device displayed Select setup
S	The setup menu is displayed

```
  Select printer control:
L-Change page length (now 66 lines)
  (Length=0 for continuous form.)
W=Change page width (now 132 chars)
S=Manual setup codes
P=Print report
```

Select S for manual setup.

S (Do not send ↵)** System appears to hang. Basically, the Osborne is waiting for control codes.

^2 ↵ Send a control 2, using the 2 key on the key pad to the right and the control key.

P Spread sheet is printed.

Notice that only up to Col L was printed.

That's because there was not enough room to print all data. A ↩ finishes the data under the data already printed. You could have deselected the printer, hit the form feed and reselected the printer. Then the new data following would be printed on a second sheet of paper, which could be placed next to the first for easy reading.

If you have a wide carriage machine (83A, 93, or 84 Step II), you could print the whole sheet across one page. Before doing that, however, you must change the paper width to 224 columns. Once the setup menu is displayed, you select W instead of S. Then enter:

224↩

The setup menu will be displayed again, but page width now=224.

Select S and continue as shown.

**You may select L or W and change them before selecting S.

Note: Your printer will stay in condensed mode until you turn it off, or send the 10 CPI command. The 10 CPI command is a ^0 function key; and must be sent from the printer setup routine.

Correspondence Mode (Example 3)

If you have a ML-92, 93, or 84 Step II, you may print in CQ mode (Correspondence quality). You may not print in CQ/Condensed mode. The printer will ignore CQ and print normal condensed mode.

Key to Type	Result
	Command line displayed
/0	Output command issued Select D for display
D	Display command issued, Enter coordinates
A1:G25↩	Device displayed Select setup
S**	The setup menu is displayed

```
  Select printer control:
L=Change page length (now 66 lines)
  (Length=0 for continuous form)
W=Change page width (now 32 chars)
S=Manual setup codes
P=Print report
```

Select S for manual setup

^7^5↩* Control 7 and Control 5

P Printer should print in CQ mode

***Note: If the spread sheet was in condensed mode from the previous example, the ^7^5↩ should be changed to ^0^7
^5 ↩.

Function Keys

Location BIOS 1.3	Location BIOS 1.4	Function Key	Value Installed	Function
2012	2025	^0	1E	10 CPI
2013	2026	^1	1C	12 CPI
2014	2027	^2	1D	Condensed
2015	2028	^3	36	6 LPI*
2016	2029	^4	38	8 LPI*
2017	202A	^5	31	CQ*
2018	202B	^6	30	DP*
2019	202C	^7	1B	ESC Code
201A	202D	^8	1F	Wide Print
201B	202E	^9	N/A	

*Must be preceded by the ^7 function key.

This table contains the information and the functions for each function key. Remember, a function key is the control key and numeric key (0-9) on the right key pad.

Functions Keys Quick Reference

Function Key	Function	Printers ML82A/83A	 ML92/93	 ML84 Step II
^0	10 CPI	Yes	Yes	Yes
^1	12 CPI	No	Yes	
^2	Condensed	16.5 CPI	17 CPI	17 CPI
^0^8	5 CPI	Yes	Yes	Yes
^1^8	6 CPI	No	Yes	Yes
^2^8	Condensed/Wide	8.3 CPI	8.5 CPI	8.5 CPI
^7^3	6 LPI	Yes	Yes	Yes
^7^4	8 LPI	Yes	Yes	Yes
^7^5	CQ Mode	No	Yes	Yes
^7^6	DP Mode	No	Yes	Yes

No=Not supported by the printer
Yes=Supported by the printer

* * * * * * *

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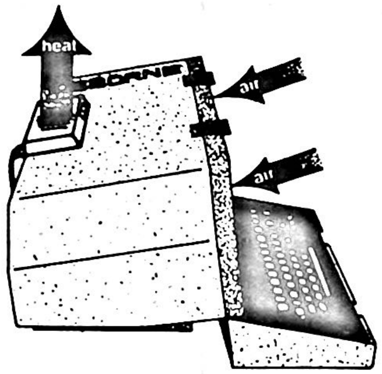

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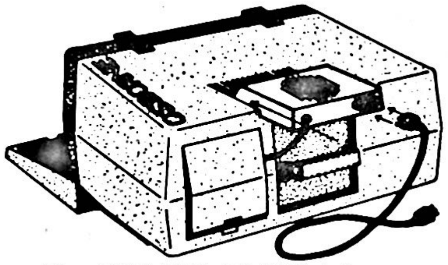

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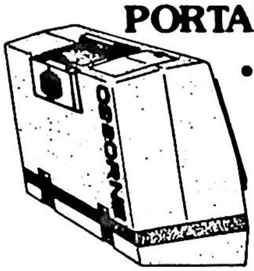

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APPLICATIONS TOOLBOX

Managing Data with MBasic, Supercalc and Mailmerge: or Three's Not Really A Crowd

by Louie Crew

I use Mailmerge to format an eXecute file for Supercalc so that I can post my monthly financial transactions to a complex spreadsheet (see Figure 1).

Note that I reserve Columns A and B for new postings. When I type the amount of a new transaction in the appropriate line of Column A, the formula in Column B of that line adds the new amount to any other amounts posted on that line in this session; otherwise Column B posts just the one new entry.

But the formulas also require that either you add a zero or otherwise blank the last entry of any one line before you move to post to any other line; each carriage return "re-adds", to Column B, any amounts still in any line of Column A. Also, once the postings are done, you have to clear out all the formulas to restore the data to zero. Clearly the tasks are just too cumbersome to be worth the doing — so far.

That's where the computer comes to the aid. The next trick is easy: get the computer to do all of this posting and reformating for you. First, MBASIC (Figure 2) prompts me to store all data on each transaction in a data file. Then I Mergeprint (Figure 3) the data directly from the data file to an eXecute file. Then, when I enter SuperCalc and load my spreadsheet, with only 4 more strokes the computer does all of the postings for me: /x^1 Here /x calls for the file to be eXecuted, and ^1, a Special Function Key, specifies "POST$.XQT↵"--the filename which I routinely assign to these eXecutable files when mergeprinting them.

MXQT$ clears out the posting columns and starts them fresh. MXQT$-A formats the individual postings. Since I normally post only monthly, I combine the two. Those who want to post frequently, but total the postings less frequently, can do so simply by cutting the .FI line in Figure 3 and treating the MXQT$ and MXQT$-A as two separate operations. They would also need to duplicate, in MXQT$-A, the six initial formatting commands now needed only in MXQT$. They should use MXQT$-A at each session but MXQT$ only at times when they are ready to move monthly (or weekly, or quarterly, or yearly...) totals. When I move the totals to another column, I must be sure to move only the values, that have the SuperCalc command sequence:
/CB7:B55,*7,V↵ (* = the column to which I am moving the totals).

This plan leaves not only a spreadsheet accurately and quickly updated, but also data files which can be easily combined with others and easily processed for different kinds of reports, via SuperCalc, Mailmerge, or MBASIC.

Figure 1: The Supercalc Spreadsheet

```
  ¦  A  ¦¦          B          ¦ ¦          D         ¦¦  E  ¦¦  F  ¦¦  G  ¦
 1¦New          Subtotals           Account for:    1984
 2¦Postings.    for this session:
 3¦                                                          JAN.    FEB.    MAR.
 4¦
 5¦
 6¦
 7¦         IF(B7<>0.A7+B7.A7)        AUTOMOBILE----------
 8¦         IF(B8<>0.A8+B8.A8)          GAS:
 9¦         IF(B9<>0.A9+B9.A9)          INSURANCE:
10¦          IF(B10<>0.A10+B10.A10)       OTHER:
11¦          IF(B11<>0.A11+B11.A11)     CLOTHES:
12¦                                     CONTRIBUTIONS-------
13¦          IF(B13<>0.A13+B13.A13)       ORGANIZATIONS:
14¦          IF(B14<>0.A14+B14.A14)       CANDIDATES:
15¦          IF(B15<>0.A15+B15.A15)     ENTERTAINMENT:
16¦          IF(B16<>0.A16+B16.A16)     FOOD:
17¦          IF(B17<>0.A17+B17.A17)     HOUSEHOLD:
18¦          IF(B18<>0.A18+B18.A18)     INTEREST:
19¦          IF(B19<>0.A19+B19.A19)     LIQUOR.
20¦          IF(B20<>0.A20+B20.A20)     MEDICAL. INSURANCE
21¦          IF(B21<>0.A21+B21.A21)       DENTIST:
22¦          IF(B22<>0.A22+B22.A22)       DOCTOR:
23¦          IF(B23<>0.A23+B23.A23)       DRUGS:
24¦                                     PROFESSIONAL--------
25¦          IF(B25<>0.A25+B25.A25)       BOOKS. JOURNALS:
26¦          IF(B26<>0.A26+B26.A26)       EQUIPMENT:
27¦          IF(B27<>0.A27+B27.A27)       MEMBS.. REGIS.:
28¦          IF(B28<>0.A28+B28.A28)       STAMPS:
29¦          IF(B29<>0.A29+B29.A29)       SUPPLIES:
30¦          IF(B30<>0.A30+B30.A30)       TELEP. CALLS:
31¦                                     PROF. TRAVEL--------
32¦          IF(B32<>0.A32+B32.A32)       FARES:
33¦          IF(B33<>0.A33+B33.A33)       LODGING:
34¦          IF(B34<>0.A34+B34.A34)       MEALS:
35¦          IF(B35<>0.A35+B35.A35)     RENT:
36¦          IF(B36<>0.A36+B36.A36)     SAVINGS:
37¦          IF(B37<>0.A37+B37.A37)     TAXES:
38¦          IF(B38<>0.A38+B38.A38)     TELEPHONE (EXC. T):
39¦          IF(B39<>0.A39+B39.A39)     UTILITIES:
40¦          IF(B40<>0.A40+B40.A40)     YMCA:
41¦          IF(B41<>0.A41+B41.A41)     MISC. NON-DEDUCT.:
42¦          IF(B42<>0.A42+B42.A42)     TAWF:
43¦          IF(B43<>0.A43+B43.A43)     RETIREMENT. INS...
44¦                                     --------------------
45¦                                     INCOME--------------
46¦          IF(B46<>0.A46+B46.A46)     W-2 AUTOMATIC DEDC
47¦          IF(B47<>0.A47+B47.A47)     DIVIDENDS:
48¦          IF(B48<>0.A48+B48.A48)     REIMBURS. TRAVEL:
49¦          IF(B49<>0.A49+B49.A49)     HONORARIA:
50¦          IF(B50<>0.A50+B50.A50)     MANUSCRIPTS SOLD:
51¦          IF(B51<>0.A51+B51.A51)     MISCELLANEOUS:
52¦          IF(B52<>0.A52+B52.A52)     PROPERTY SOLD:
53¦          IF(B53<>0.A53+B53.A53)     SAVINGS CASHED.
54¦          IF(B54<>0.A54+B54.A54)     TAX REBATED.
55¦          IF(B55<>0.A55+B55.A55)     WAGES WITH W-2s:
```

Figure 2: The MBASIC Program to Build NOW.DF

```
30 REM ¦ THIS PROGRAM IS CALLED ``F1.BAS''
40 REM ¦
50 REM ¦ Created in April 1984. by Louie Crew
60 REM ¦
100 REM ¦ It makes a data file ``NOW.DF'' on Drive B.
110 REM : The file records financial transactions for a
120 REM ¦ specified period . ``NOW.DF'' can be combined with other
130 REM ¦ financial data files or can be saved as is with
140 REM ¦ a new name.
150 REM ¦.........................................................
```

⇨

```
240 PRINT CHR$(26)
250 OPEN ``O``.#1.``B:NOW.DF``
260 INPUT ``Number                      `` :NUMBER$
270 IF NUMBER$=```` THEN 650
280 INPUT ``Date in 4 digits            `` :DATE
290 INPUT ``Payor or payee              `` :P$
300 INPUT ``Code                        `` :CODE
310 INPUT ``Amount debited or <>        `` :AMOUNTDEBITED
320 IF AMOUNTDEBITED <> 0 THEN 350
330 INPUT ``Amount credited             `` :AMOUNTCREDITED
340 GOTO 360
350 AMOUNTCREDITED = 0
360 INPUT ``Description                 `` .DESCRIPTION$
370 PRINT CHR$(26)
380 PRINT ``Check to see whether this is what you wanted:``
390 PRINT
400 PRINT ``Number.......................``:NUMBER$
410 PRINT ``Date.........................``:DATE
420 PRINT ``Payor or payee...............``:P$
430 PRINT ``Code.........................``:CODE
440 IF AMOUNTCREDITED=0 THEN 470
450 PRINT ``Amount credited.............``:AMOUNTCREDITED
460 GOTO 480
470 PRINT ``Amount debited..............``:AMOUNTDEBITED
480 PRINT ``Description.................``:DESCRIPTION$
490 PRINT
500 INPUT XX$
510 IF XX$=``Y`` THEN 620
520 IF XX$=``y`` THEN 620
530 IF XX$=``N`` THEN 580
540 IF XX$=``n`` THEN 580
550 PRINT
560 PRINT ``Answer only Y for yes or N for no.``:CHR$(7)
570 GOTO 500
580 PRINT
590 PRINT ``Revise this entry from the start.``
600 PRINT CHR$(26)
610 GOTO 260
620 WRITE #1.CODE.AMOUNTCREDITED.AMOUNTDEBITED.DATE.NUMBER$.
P$. DESCRIPTION$
630 PRINT
640 GOTO 260
650 CLOSE
660 END
```

Note: CODE here is the same as the SuperCalc Line Number.

Figure 3: Mailmerge Files MXQT$ and MXQT$, Chained

.PF ON Lets the machine obey the other formatting commands.

.RM 240 Sets the max. no. of characters for the data entry.

.MT 0 This prevents lots of extra carriage returns.

.MB 0 This prevents lots of extra carriage returns.

.PL 3 This prevents lots of extra carriage returns.

.PO 0 This assures that your data file will be flush left

.. This indicates that this line is comments

```
  .. This Mailmerge file is ``MXQT.`` It creates an eXe-
  .. cutable file to post current transactions stored in
  .. ``NOW.DF.`` The first part here clears old postings and
  .. restores the formulas needed to calculate the new
  .. postings. It then moves via ``.FI`` to format & post
  .. each transaction separately.
  ..
  .. Always answer the mergeprint prompts ``Y`` for disk file
  .. and ``POST$.XQT`` as the name. SuperCalc cannot read an
  .. eXecute file unless it has the extension `` .xqt`` .
  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . .
  /BA7:B11
  /BA13:B23
  /BA25:B30
  /BA32:B43
  /BA46:B55
  /=B7
  IF(B7<>0.A7+B7.A7)
  /RB7.B8:B11
  /RB7.B13:B23
  /RB7.B25:B30
  /RB7.B32:B43
  /RB7.B46:B55
  .FI MXQT$-A
  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . .
  . .Here follows File MXQT$-A. Stored Separately on the
Disk.......
  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . .
  .DF NOW .DF
  .RV CODE. AMOUNTCREDITED. AMOUNTDEBITED. DATE. NUMBER.
PAYEE. DESCRIPTION
  ..
  .. Line one prompts the computer to goto the line (CODE) for
  .. each transaction. Automatically Supercalc will go to
  .. Column A when no other column is specified.
  .. The next line prompts the computer to post either the
  .. credit or debit. The letter ``O`` (not Zero) here tells
  .. the computer to leave blank the irrelevant one.
  .. The final line retores column A of each line to zero so
  .. that the formulas will not continue to add the old data.
  ..
  .. This file has to be separate from and read into ``MXQT$.``
  .. If together. the session formatting commands of ``MXQT$``
  . . would repeat for each of these transactions .
  =&CODE&
  &AMOUNTCREDITED/O&&AMOUNTDEBITED/O&
  0
```

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* * *

A WordStar Merge Print Program

by Robert Docken

Many applications of merge print can be greatly enhanced by offering choices to the computer operator at the time of printing a document or a series of documents. The following print routine makes use of a series of files, PRINT???.*, all of which are listed together in the file PRINT.LST for easy viewing and editing. In order to implement this program, each PRINT???.* is block-marked and written to the file name specified in the file PRINT.LST. For anyone familiar with MergePrint and WordStar, the routine should be easy to understand.

This idea can be modified easily to suit a variety of applications. Along with many of my friends, I have found the "program" very useful. It relies, of course, on the MergePrint dot commands, as follows:

.AV [Ask for a Variable]
.SV [Set a Variable]
.DM [Display a Message on Screen]
.CS [Clear Screen]
.FI [File Insert]

The various choices are entered in menu form, and the response of the operator is included as part of a file name, which effects sort of an if/notif logic. Note also that dot commands can make use of substitutions in MergePrint in order to assign their values during a specific printing run. Though at first glance, this might appear cumbersome, you can tailor the menus, choices, &c. to fit your needs, and save lots of time.

TO SPEED EXECUTION, turn off the File Directory at the WordStar's "Editing No File" Menu. Otherwise, WordStar will reaccess and display the disk directory each time a prompt is displayed by the MergePrint "program."

One last note: WordStar separates text from footings and headings. That is, a dot command inserted in the body of the text will not effect the footing or heading, so you must insert the commands for underlining, boldface, &c. explicitly in footing or heading commands, if you want headings or footings underlined or in boldface, or whatever.

Note: Turn off the File Directory at the "Editing No File" menu before merge printing this "program." This allows sufficient room on the screen for the messages.

MERGE PRINT PROGRAM

```
  .pl 66
  .mt 6
  .mb 6
  ..
  .. PRINT.LST contains all files for Print Routine
  ..
  .. Version 1.2
  ..
  .. 11/29/83
  ..
  .. Begin File PRINT
  ..
  .. Format Default is No Reformatting
  .PF off
  .UJ 0
  .. Page Offset Set for NEC Printer
  .po 60
  .pn 1
  .. Set up Drive for Print Files
  .cs
  .dm Routine is for NEC Printer
  .dm
  .dm Watch Your Cookies on this One!!
  .dm
  .dm >> Enter Page Offset. 60 for Normal Print <<
  .dm
  .av ''     ''.off
  .po &off&
  .. >> Set Drive for These Print Program Files
  .. >> Usually this is set to Drive A
  .sv mdr.A
  ..
  .. Set Footfile
  .sv footfile. &mdr&:printft.pp
  .cs
  .dm NOTE: Print Routine Is For NEC
  .dm
  .dm        !! Please Enter Your >>Letter<< Choice !!
  .dm
  .dm> A < = Reformat Right Margin to Column 65
  .dm
  .dm> B < = DO NOT Reformat Right Margin
  .dm
  .dm        Enter Letter Choice. then Hit Return:
  .dm
  .av ''            ''.mans
  .DM
  .FI &mdr&:PRINT&mans&
***************
  .. PRINTA
  .. Set Page Format ON
  ..
  .cs
  .dm NOTE: Print Routine Is For NEC
  .dm
  .dm      !! Enter Line Spacing. e.g.. 1. 2. or 3. &c.
  .dm
  .dm        Enter Choice. then Hit Return:
  .dm
  .av ''            ''.space
  .pf ON
  .ij off
  .oj off
  .lm 1
  .rm 65
  .ls &space&
  .fi &mdr&:printb
*************
```

⇨

```
 .. PRINTB
 .. Menu For Total Footing or only Page #
 .. File PRINT set footing to Page # only.
 .. Page Formatting Is Unchanged by This File.
 ..
 .cs
 .dm NOTE: Print Routine Is For NEC
 .dm
 .dm          !! Please Enter Your ))Letter(( Choice !!
 .dm
 .dm) C ( = Page # Only (``p. 3``) in Footing
 .dm
 .dm) D ( = Footing Has Disk & File Names. Date &c.
 .dm
 .dm          Enter Letter Choice. then Hit Return:
 .dm
 .av ``              ``.mans
 .DM
 .FI &mdr&:PRINT&mans&
****************

 .. PRINTC
 .. Menu for Single or Multiple File Print
 .. Footing Is Unchanged by This File
 .cs
 .dm NOTE: Print Routine Is For NEC
 .dm
 .dm          !! Please Enter Your ))Letter(( Choice !!
 .dm
 .dm) E ( = SINGLE File Print
 .dm
 .dm) F ( = MULTIPLE File Print
 .dm
 .dm          Enter Letter Choice. then Hit Return:
 .dm
 .av ``              ``.mans
 .DM
 .FI &mdr&:PRINT&mans&
***********

 .. PRINTD
 .. Set Footing to Include Disk & File Names.
 .. Date. & Page No.
 ..
 .CS
 .AV ``Enter Today's Date: ``.DATE
 .DM
 .AV ``Enter Disk Number : ``.DISK
 .DM
 .sv footfile. &mdr&:printft.all
 .fi &mdr&:printc
*********

 .. PRINTE
 .. Single File Print
 .cs
 .dm
 .dm Enter Name of File to Print:
 .dm
 .av ``          ``.FILE
 .DM
 .dm Now Printing &file&
 .dm
 .fi &footfile&
 .FI &FILE&

 .cs
 .dm That's All Folks!
*************

 .. PRINTF
 .. Multiple File Print
 ..
 .cs
 .dm You MUST Have File Names Listed in a
 .dm
 .dm Separate File. e.g.. ``FILES``
 .dm
 .dm Enter File with List of Files to Print:
 .DM
 .dm N.B.: Include Drive if Not Default. e.g. ``A:FILES``
 .dm
 .av ``     ``. FILENAMES
 .DM
 .dm Enter Drive Where Your Print Files Are:
 .dm
 .av ``     ``.mdrfyl
 .dm
 .cs
 .dm     )) Between Files MENU ((
 .dm
 .dm) P ( To Begin Each File With New Page
 .dm
 .dm) Q ( To Insert One LINE ONLY Between Files
 .dm
 .av ``        ``.between
 .dm
 .sv file. &filenames&
 .fi &footfile&
 Files Included Are:

 .fi &filenames&

 .pa
 .pn 1
 .FI &mdr&:PRINT&between&

 .cs
 .dm That's All Folks!
**********
 .. PRINTP
 .. Data File Loop for Multiple File Print
 .. Inserts a Page Between Files
 .df &FILENAMES&
 .rv file
```

```
   .fi &footfile&
   .RP
   .dm
   .dm Now Printing &file&
   .DM
   .FI &mdrfyl&:&FILE&
   .... Insert ⮐ at End of &mdrfyl&:&file&
   .pa
**********

   .. PRINTQ
   .. Data File Loop for Multiple File Print
   .. Inserts One Line Only Between Files
   ..
   .df &FILENAMES&
   .rv file
   .fi &footfile&
   .RP
   .dm
   .dm Now Printing &file&
   .DM
   .FI &mdrfyl&:&FILE&
************

   .. PRINTFT.ALL
   .fo            DISK &DISK&. &DATE&   -   &FILE&  p. #
***********

   .. PRINTFT.PP
   .fo                             p. #
*********************
```

* * *

dBASE II

Screen Dump with dBASE II (Reprise)

by Tim Snyder

Last month we explored a way of printing the characters on the screen using dBASE II. The program worked just fine, but it had the disadvantage of being very slow. Generally, programs written in assembly language run much faster. Wouldn't it be great if we could write an assembly language program to dump the screen to the printer and be able to use it from within a dBASE II program? Well it can be done. In this article we will develop the assembly language screen dump routine and prepare it for use in dBASE II. Next month we will tie it all together and use it from within dBASE II.

As we saw last month, the characters on the Osborne screen are stored in memory beginning at address F000 in hexadecimal notation. The screen is actually 128 characters wide by 32 lines long. The upper left hand corner begins at address F000H. What we did last month was to read the value of each character on the screen, assemble them in a variable, and send the variable to the printer at the of each line using dBASE II commands.

In the assembly language routine that follows we will read each character from the screen, send it directly to the printer, and send a carriage return and line feed at the end of each line. It will print 24 lines of 80 columns each. Prepare the program using the non-document mode of WordStar.

Anything following a semi-colon is a comment.

```
; SCREENP.ASM
; Program to send characters on screen to Printer.
; Subroutine for dBASE II.
; by Tim Snyder
;
; CP/M Functions
BDOS        EQU 5           ;BDOS Entry Location
WRLST       EQU 5           ;CP/M Function to send to LST: device
; ASCII Constants
CR          EQU 0DH         ;Carriage Return Character
LF          EQU 0AH         ;Line Feed Character
; Program Constants
WIDTH       EQU 80          ;Width of screen to be printed
LENGTH      EQU 24          ;Length of screen to be printed
SCRNWID     EQU 128         ;Width of one line of video
BASE        EQU 0F000H      ;Beginning of Video area of Memory
;
;
            ORG 100H
;
            LXI SP.STAK     ;Set up User's Stack
            MVI A.SCRNWID   ;Put Screen Width in A
            SBI WIDTH       ;Subtract Width Printed
            STA ADDNADDR    ;Store Amount to Increment Address at
                            ;End-of-Line to ADDNADDR
;
            MVI B.LENGTH    ;Put Line Count in Counter B
            MVI C.WIDTH     ;Put Line Width Counter in C
            LXI H.BASE      ;Put Starting Address in HL
LINE:       MOV A.M         ;Get Video Character in A
            ANI 7FH         ;Zero the 8th Bit
            CALL LO         ;Send Video Character to Printer
            INX H           ;Increment to next Video Address
            MVI A.0         ;Zero the A Register
            DCR C           ;Decrement Line Width Counter
            CMP C           ;Compare C to A
            JNZ LINE        ;Get another Character if not Zero
;
            CALL LCRLF      ;Print CR and LF at End of Line
            XCHG            ;Exchange DE and HL
            LHLD ADDNADDR   ;Put Amount to Increment Video
                            ;Address in HL
            DAD D           ;Add DE to HL to Make Address for
                            ;Start of New Line
            MVI C.WIDTH     ;Put Printing Width in C
            DCR B           ;Reduce Line Count by 1
            CMP B           ;Compare Line Count to 0
            JNZ LINE        ;If not Zero. Print Next Line
            RET             ;Finished. Go Back to dBASE II
;
```

⇨

```
; Send Carriage Return and Line Feed to LST: Device
LCRLF:          MVI A,CR          ;Put CR in A
                CALL LO           ;Print it
                MVI A,LF          ;Put Line Feed in A
                CALL LO           ;Print it
                RET
;
; Send Character to LST: Device
LO:             PUSH B            ;Save the Registers
                PUSH D
                PUSH H
                MVI C,WRLST       ;Put BDOS Print Function in C
                MOV E,A           ;Put Screen Character in E
                CALL BDOS         ;Print Character
                POP H             ;Restore the Registers
                POP D
                POP B
                RET
; Set up stack space
                DS 64
STAK            DB 0
ADDNADDR DS 1 ;Storage Location
                for Addition to
                Address
                END
```

Now assemble the program using the CP/M Utility ASM.COM and load it with LOAD.COM. If you need help doing this, refer to Chapter 8, Lesson 3, where assembly language programming is explained.

Try executing this program by typing in SCREENP at the A> CP/M prompt. Notice that everything that is on your screen starting at line 16, going down to line 32, and then lines 1 to 8 are printed. For some reason which I haven't yet figured out, (or haven't found if it is in the manual) CP/M keeps line 16 at the beginning of the video area of memory. Don't worry, this will all work out when we get into dBASE II.

So now we have an assembly language program that will print the screen. However, it is loaded into memory at address 100H and it works all by itself. If we were to load dBASE II, it would be over-written and lost. What do we do? dBASE II has a utility function named, CALL, that allows you to call a machine language program from within dBASE II. (This is spelled out in Changes section at the back of the manual) The subroutine has to be loaded in memory at an address above A400H, the starting address of the routine has to be SET, and a calling variable has to be defined. Then the subroutine can be called using the command, CALL varname. The character variable can be used to pass arguments to and from the subroutine.

This is getting pretty technical, but hang on, we will do it one step at a time. First we have to get the subroutine into memory starting at address A400H. Change the program above so that it originates a A400. Change ORG 100H to:

```
   ORG  A400H
```

and remove the following statements from the beginning and end of the listing:

```
                LXI         SP,STAK

                DS          64
STAK            DB          0
```

We will use dBASE II's stack. If we don't we will never get back from the subroutine.

This time just assemble the program. Note that the program would take up more than 40K of space on your disk if we loaded it. It would not run if we attempted to use it because it starts at A400H instead of 100H where CP/M expects it to be.

Now print out the .PRN file that the assembler created. Note that it looks like the .ASM file that you created plus it has some numbers added to the left. These are the addresses and their contents for each step of the program. The left half of your copy should look like this. I took out the comments for readability.

```
; SCREENP.ASM
; Program to send characters on screen to Printer.
; Subroutine for dBASE II.
; by Tim Snyder
;
; CP/M Functions
0005 =      BDOS        EQU 5
0005 =      WRLST       EQU 5
; Universal Constants
000D =      CR          EQU 0DH
000A =      LF          EQU 0AH
; Program Constants
0050 =      WIDTH       EQU 80
0018 =      LENGTH      EQU 24
0080 =      SCRNWID     EQU 128
F000 =      BASE        EQU 0F000H
;
;
A400                    ORG 0A400H
;
A400 3E80               MVI
                        A,SCRNWID
A402 DE50               SBI WIDTH
A404
3244A4                  STA
                        ADDNADDR
;
A407 0618               MVI
                        B,LENGTH
A409 0E50               MVI
                        C,WIDTH
A40B
2100F0                  LXI H,BASE
A40E 7E     LINE:       MOV A,M
A40F E67F               ANI 7FH
A411
CD37A4                  CALL LO
A414 23                 INX H
A415 3E00               MVI A,0
A417 0D                 DCR C
A418 B9                 CMP C
A419
C20EA4                  JNZ LINE
;
A41C
CD2CA4                  CALL LCRLF
A41F EB                 XCHG
A420
2A44A4                  LHLD
                        ADDNADDR
A423 19                 DAD D
A424 0E50               MVI
                        C,WIDTH
A426 05                 DCR B
A427 B8                 CMP B
A428
C20EA4                  JNZ LINE
A42B C9                 RET
;
A42C 3E0D   LCRLF:      MVI A,CR
A42E
CD37A4                  CALL LO     - A431 3E0A
            MVI A,LF
A433
```

```
CD37A4              CALL LO    - A436 C9
          RET
:
A437 C5   LO:       PUSH B
A438 D5             PUSH D
A439 E5             PUSH H
A43A 0E05           MVI
                    C.WRLST
A43C 5F             MOV E.A    - A43D CD0500
          CALL BDOS
A440 E1             POP H      - A441 D1
          POP D
A442 C1             POP B
A443 C9             RET
A444      ADDNADDR  DS 1
A445                END
```

What you have in two columns down the left side is the entire program in hexadecimal format as it is in memory beginning in address A400H. The addresses are listed in the first column and there corresponding contents are listed in hexadecimal in the second column. Each hex number is a two-place character.

How do we get this into memory from dBASE II? dBASE II has a function, POKE, that allows us to put values into memory. It has the syntax,

POKE addr,value

where addr is the address in decimal and value is the value to be poked in decimal. Great, but we know the values in hexadecimal. We'll have to convert them if we want to load the program into memory using dBASE II. That will be the subject of next month's article.

* * * * * * *

FOG MEMBER LIBRARY NEWS

Changes in the Library Structure

by Gale Rhoades

The FOG disk library is being slightly reorganized to accomodate the changes which have occurred in the past few months. While the basic structure set up by Jim Woolley will not be changed, there will be several new categories added to the library. Each section of the library will have a separate librarian. Starting with disks released after July 1,1984, this new structure will be implimented.

The most drastic change will be in the handling of Osborne 1 specific programs. In the past, all of the sections included programs which would only work on the Osborne 1 as well as programs which would work on any CP/M system. With the opening of a new section for the Osborne 1, the original sections will now only include those programs which will work on

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the majority of CP/M systems. Where known, the librarians will list those systems on which each program will NOT work.

Programs which are system specific will be in that section of the library. The library will now include all of these sections:

Disk Name	Category	Librarian
-FOG/LIB	Library Information	FOG Office
-FOG/GAM	Games	Robert Carter
-FOG/UTL	Utilities	Jim Wack
-FOG/APP	Applications	Walt Beaudry
-FOG/MIS	Miscellaneous	Troy Soult
-FOG/LNG	Languages (Programming)	Sharon Kittrell
-FOG/HAK	Hackers (Need Repairs or Spe-Special Expertise)	Jack Brown
-FOG/OS1	Osborne 1 Specific	Mike Faith
-FOG/EX1	Executive Specific	Jim Switz
-FOG/MMD	Morrow Specific	Steve Reed
-FOG/PMC	MicroMate Specific	Bill Justice
-FOG/MAX	Lobo Max Specific	Joel Seber
-FOG/KAY	KayPro Specific	Dave Kent
-FOG/ZOR	Zorba Specific	??????

At this time, all disks in the library will be maintained on either Osborne 1 Single Density or Osborne 1 Double Density as is determined to be the most convenient by the librarian of that section. While this may change later, it will first be necessary that we find some means of easily and without great cost reproducing the disks. As always, once a disk has been officially installed in the library, it must not be altered. A write-protect tab will be attached; this tab must never be removed. There must be no attempt to write or erase anything on a library disk; only reading or copying is permitted. The only exception is if a librarian determines that a proprietary file was inadvertantly placed on a disk in violation of FOG policy; in that case, the librarian will delete the file. Any suggested corrections to a permanently installed library disk will be communicated via the NEWSmmyy.LIB files.

Only for the /LIB (LIBRARY) section will we install a preliminary or incomplete version of a library disk. In such cases, the sequence number will be set to XXX, X+1, X+2, etc; therefore, the disk name will be of the form -FOG/LIB.XXX. Also, a file of zero length with the name -INCOMPL.ETE will be included in the disk directory. Such a disk will still be write-protected and must not be altered except by the FOG office. Typically, the most recent NEWSmmyy.LIB file will be found on the disk -FOG/LIB.XXX. The BEST-OF and synopsis files will be on a -FOG/LIB.X+? disk. An up-to-date MAST.CAT library master catalog file will be found on the disk -FOG/LIB.CAT.

In order to better aquaint some of the newer members and also to refresh the memory of those who have not yet availed themselves of the library, I am going to repeat Jim Woolley's original descriptions of the sections with some modifications:

Files in the /LIB category relate to use of the library. The catalog system will be included along with some useful utilities. To broadcast announcements, such as new disks recently added or corrections to existing programs, a file named using the format NEWSmmyy.LIB will be created, where mmyy is the month and year of the announcement. This section will be handled in the FOG office to facilitate coordination amonngst the various sections.

The /GAM category is for the young or young at heart. Programming technique may often be learned by studying these games.

In many respects, the /UTL category overlaps with /APP. Utilities are primarily .COM files which may be executed at the A> prompt to facilitate use of the computer. CP/M commands like PIP, COPY, and XDIR are familiar utilities included with most CP/M systems. Similar programs are provided in the /UTL category. MODEM7 and related terminal emulators may also be found under /UTL, while some may consider these to be application programs.

Applications (/APP) are generally directed toward solution of a significant problem such as financial management, work processing, or statistical analysis. There are some files included here which are only related to applications, such as programs to modify WordStar; these may have been more properly located in the /UTL category.

The /MIS category includes printer pictures and text files on various subjects. Anything else which does not seem to fit into one of the other categories will be located here.

/LNG files include various versions of programming languages such as Z80 assembler and C.

All files and programs which appear to be in need of repair are placed in the /HAK category. These are offered as a challenge to the hackers or hobbyists who may be able to correct any deficiences and resubmit the program for implementations in one of the more legitimate categories. Also included in this sections will be working programs which are not generally used by the faint-hearted. For example, the pieces for an RCP/M system will go in this section. Generally, programs in this section will require some modification to get them to work on a specific computer.

/OS1 files are those which will ONLY work on the Osborne 1. Some of these programs may be further limited in that they will only work on single density or they may work only on a computer which has had a specific brand of 80 column upgrade installed. In some cases, it may not be possible to fully test each program on all possible configurations. Disk documentation will list any know limitations.

Library Use

/EX1 files are those which will ONLY work on the Osborne Executive. For example, a program with graphics may have to be modified to work on the Executive. The modified version would be in this section and, where possible, the changes documented.

/MMD files are those which will ONLY work on one of the Morrow MicroDecision. Again, there may be programs which will only work with a specific version of the BIOS or a specific terminal. As these limitations are discovered, they will be noted but it may not be possible to test all possible configurations.

/PMC files are those which will ONLY work on the PMC MicroMate. The caveats listed for the other sections apply here as well.

/MAX files are those which will ONLY work on the Lobo Max 80. Since this system supports both 8" and 5.25" drives as well as a non-CP/M operating system, any known limitations in use will be listed.

/KAY files are those which will ONLY work on one or more of the KayPro models. Not surprisingly, some programs in this section will work only on a specific model. Again, the programs will be tested on a many models as possible and any limitations will be noted.

/ZOR files are those which will ONLY work on the Zorba. Unfortunately, while we have many members who own a Zorba, at this time, we have not found a volunteer for librarian. When we do, the same guidelines will apply to this section as have applied to the last six sections.

Library Policy

It is the policy of FOG to include only public domain software in the disk library. A file may have a copyright notice and still be public domain if the author gives specific permission to distribute the file. Typically, permission is granted on a not-for-profit basis. Since FOG members spend a great deal of time and energy cleaning up, testing, documenting, and otherwise prepraring these disks, and since some members write programs and specify that use of the programs is restricted to other FOG members, each disk is copyrighted for use by FOG members only.

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Members of FOG may make a copy of any library disk. The library will generally be made available at FOG meetings for this purpose. Members may borrow only one disk at a time. The borrower's membership card should be left in place of the disk borrowed. The disk may then be copied. It must be promptly returned. Members should return the disk so others may use it prior to running any of the programs.

Where possible, use of the Osborne supplied utility COPY.COM is recommended for quick turnaround. For others, use of one of the versions of SWEEP or NSWEEP is recommended. Once copied, contents of the disk may then be perused at a more leisurely pace.

None of the library disks include CP/M system tracks. Therefore, only data tracks need be copied using COPY.COM. Many of the programs will not work properly unless a valid CP/M system is recorded on the system tracks.

Each library disk contains a file which describes contents and use of the files on that disk. On the early disks, this file was always named DISK.DOC. Now, the documentation reflects the disk name: /sec#nnn.DOC where "sec" is the section abbreviation and "nnn" is the disk number. A synopsis of the disks released by all librarians will be included in the NEWSmmyy.LIB file created when (mmyy) the disk is installed in the library. Therefore, it is recommended that members keep up-to-date with disks in the /LIB category, especially with -FOG/LIB.XXX.

Files prepared by the librarians of the general sections will be formated for the 52 column Osborne 1 screen and recorded in 7 bit ASCII code (zero parity bit) with no control characters other than <CR> and <LF>. Such files may be conveniently reviewed using the CP/M command TYPE with or without the printer toggle ^P. Also, ^S/^Q may be used to pause/resume the display. The files referred to *include* /sec#nnn.DOC on each disk, NEWSmmyy.LIB, BEST-OF.sec, and SYNOPSIS.sec.

Other text files included in the library are often written using WordStar in the Document mode. When TYPEd, such files are virtually unreadable. Therefore, the following methods are recommended for reviewing general text files:

1. WordStar — may be used to display on the screen or printer.
2. PIP CON:=d:filename.typ[Z] — for screen display. Use ^S/^Q to pause/resume.
3. PIP LST:=d:filename.typ[Z] to print.

Other utilities for reading text files are SHOW, DISPLAY, LIST, TYPEL, NSWEEP, and SWEEP.

* * *

EXECUTIVE

Computing Elapsed Time With Executive Clock

Stephen Burket

Have you ever wanted to compute elapsed time in a BASIC program or determine the time of day? The following explanation is how I used the clock in CP/M 3 to count the seconds it took my children to complete twenty math problems.

The first MBASIC program shows how to read the locations in CP/M 3 that house the time bits. The operating system stores the time bits in locations F8F6, F8F7 and F8F9. It's easy to read these locations but the contents have to be decoded. The way in which the system counts to sixty is not exactly straight forward. It starts at 0 and counts up to 9, then it jumps to 16 and counts up to 25 and so on. The counting sequence is as follows:

COMPUTER		SECONDS
0 to 9	=	0 to 9
16 to 25	=	10 to 19
32 to 41	=	20 to 29
48 to 57	=	30 to 39
64 to 73	=	40 to 49
80 to 89	=	50 to 59

The following program works around this counting sequence:

`10 PRINT CHR$(26)` Clears the screen

`20 L=&HF8F6` L = starting location of the time bits

`30 H=PEEK (L)` H = the computer's count for hours

`40 M=PEEK (L+1)` M = the computer's count for minutes

`50 S=PEEK (L+2)` S = the computer's count for seconds

All we have done up to this point is break out the computers count for hours, minutes and seconds. We now have to decode and compute the actual time. In this explanation we will only look at the seconds equation (SEC), keeping in mind that the hours (HRS) and minutes (MIN) equations work the same way.

`60 SEC=(FIX(S/16)*10)+(S-(16*FIX(S/16)))` Decodes seconds

`70 MIN=(FIX(M/16)*10)+(M-(16*FIX(M/16)))` Decodes minutes

`80 HRS=(FIX(H/16)*10)+(H-(16*FIX(H/16)))` Decodes hours

SEC= **(FIX(S/16)*10)** +(S-(16*FIX(S/16)))

The left part of the formula (FIX(S/16)*10) computes the ten's of seconds. For instance, if S equals 68, this equation computes 68/16 = 4.25. The FIX function rounds this off to 4. So 4 times 10 equals 40. At this point we have decoded the tens of seconds.

SEC=(FIX(S/16)*10)+ **(S-(16*FIX(S/16)))**

The units are computed by the second equation (S-(16*FIX(S/16))). We will start again with 68/16 equals 4.25 and the FIX function rounds it off to 4. The next step is to take 4 times 16 which equals 64 and then subtract it from the 68. This will give us the units. If we add the first and second equations together we get 44 seconds. The example below works through this equation:

```
                         If S = 68

SEC=(FIX(S /16)*10)+(S -(16*FIX(S /16)))
   =(FIX(68/16)*10)+(68-(16*FIX(68/16)))
   =(FIX( 4.25)*10)+(68-(16*FIX( 4.25)))
   =(    4     *10)+(68-(16*    4      ))
   =(     40      )+(68-(     64       ))
   =(     40      )+(        4          )
   =44
```

The only thing left is to print the decode data.

```
90 PRINT HRS.`` : ``:MIN:`` :``:SEC
100 END
```

As I stated in the beginning, I used this coding sequence in a math game for my children. In their school they are graded on how many math problems they can do correctly in five minutes. The following program will ask them to solve twenty math problems and then compute how many are wrong as well as how long it took them (in seconds) to answer. The problems change in every sequence just to keep them honest.

```
10 DIM X(20).Y(20).Z(20)
20 '
30 '-CLEAR THE SCREEN
40 '
50 PRINT CHR$(26)
60 '
70 '-HAVE THEM SELECT AN OPTION
80 '
90 OK=0
100 INPUT ``(A)DD.(M)ULTIPLY.(S)UBTRACT.(D)IVIDE = ``;TYPE$
110 IF TYPE$=``A'' THEN TYPE$='' + ``:OK=1
120 IF TYPE$=``M'' THEN TYPE$='' * ``:OK=1
130 IF TYPE$=``S'' THEN TYPE$='' - ``:OK=1
140 IF TYPE$=``D'' THEN TYPE$='' / ``:OK=1
150 IF OK=0 THEN 90
160 '
170 '-CLEAR THE SCREEN
180 '
190 PRINT CHR$(26)
200 '
210 '-SET UP SOME RANDOM NUMBERS
220 '
230 PRINT ``HIT RETURN WHEN READY AND THEN WAIT FOR THE PROBLEMS''
240 WRONG=0
250 IN$=INKEY$:C=C+1:IF IN$=```` THEN 250
260 RANDOMIZE C
270 '
280 '-SELECT 20 NUMBERS FOR THE -X- VARIABLE
290 '
300 FOR I=1 TO C
```

```
310 IF I<=C-21 THEN 340
320 X(C-I)=INT(RND*10)
330 D=D+2
340 REM
350 NEXT
360 RANDOMIZE D
370 '
380 '-SELECT 20 NUMBERS FOR THE -Y- VARIABLE
390 '
400 FOR I=1 TO D
410 IF I<=D-21 THEN 620
420 Y(D-I)=INT(RND*10)
430 '
440 '-----MAKE SURE X IS LARGER THAN Y (FOR SUBTRACTION &
DIVISION)
450 '
460 IF X(D-I)>Y(D-I) THEN 500
470 W=X(D-I)
480 X(D-I)=Y(D-I
490 Y(D-I)=W
500 REM
510 '
520 ;-----TO COMPUTE X FOR DIVISION: X=X*Y
530 '
540 IF TYPE$<>'' / `` THEN 610
550 '
560 '--------MAKE SURE X AND Y DO NOT EQUAL ZERO (DIVIDE BY ZERO
ERROR)
570 '
580 IF X(D-I)=0 THEN X(D-I)=1
590 IF Y(D-I)=0 THEN Y(D-I)=1
600 X(D-I)=Y(D-I)*X(D-I)
610 REM
620 REM
630 NEXT
640 '
650 '-CLEAR THE SCREEN
660 '
670 PRINT CHR$(26)
680 '
690 '-DECODE THE START TIME AND SAVE IT
700 '
710 L=&HF8F6
720 H=PEEK(L)
730 M=PEEK(L+1)
740 S=PEEK(L+2)
750 SEC=(FIX(S/16)*10)+(S-(16*FIX(S/16)))
760 MIN=(FIX(M/16)*10)+(M-(16*FIX(M/16)))
770 HRS=(FIX(H/16)*10)+(H-(16*FIX(H/16)))
780 '
790 '-DISPLAY THE PROBLEMS AND ASK FOR THE ANSWERS
800 '
810 FOR I=1 TO 20
820 PRINT X(I);TYPE$;Y(I);'' ``;
830 INPUT Z(I)
840 PRINT
```

```
850 NEXT
860 '
870 '-DECODE THE STOP TIME AND SAVE IT
880 '
890 H=PEEK(L)
900 M-PEEK(L+1)
910 S=PEEK(L+2)
920 SEC1=(FIX(S/16)*10)+(S-(16*FIX(S/16)))
930 MIN1=(FIX(M/16)*10)+(M-(16*FIX(M/16)))
940 HRS1=(FIX(H/16)*10)+(M-(16*FIX(M/16)))
950 PRINT CHR$(26)
960 '
970 '-COMPUTE THE TOTAL TIME TAKEN TO ANSWER THE PROBLEMS
980 '
990 TIME=(FIX((HRS1-HRS)*3600)+((MIN1-MIN)*60)+(SEC1-SEC))
1000 '
1010 '-CHECK THE PROBLEMS AND DISPLAY THE INCORRECT ONES
1020 '
1030 FOR I=1 TO 20
1040 '
1050 '--MULTIPLICATION ROUTINE
1060 '
1070 IF TYPE$<>'' * `` THEN 1140
1080 IF X(I)*Y(I)=Z(I) THEN 1130
1090 PRINT X(I);'' X ``;Y(I);'' = ``;Z(I);`` IS WRONG'';
1100 PRINT `` - THE CORRECT ANSWER IS ``;X(I)*Y(I)
1110 WRONG=WRONG+1
1120 PRINT
1130 REM
1140 REM
1150 '
1160 '--ADDITION ROUTINE
1170 '
1180 IF TYPE$<>'' + `` THEN 1250
1190 IF X(I)+Y(I)=Z(I) THEN 1240
1200 PRINT X(I);'' + ``;Y(I);'' = ``;Z(I);`` IS WRONG'';
1210 PRINT `` - THE CORRECT ANSWER IS ``;X(I)+Y(I)
1220 WRONG=WRONG+1
1230 PRINT
1240 REM
1250 REM
1260 '
1270 '--SUBTRACTION ROUTINE
1280 '
1290 IF TYPE$<>'' - `` THEN 1360
1300 IF X(I)-Y(I)=Z(I) THEN 1350
1310 PRINT X(I);'' - ``;Y(I);'' = ``;Z(I);`` IS WRONG'';
1320 PRINT `` - THE CORRECT ANSWER IS ``;X(I)-Y(I)
1330 WRONG=WRONG+1
1340 PRINT
1350 REM
1360 REM
1370 '
1380 '--DIVISION ROUTINE
1390 '
1400 IF TYPE$<>'' / `` THEN 1470
```

⇨

```
1410 IF X(I)/Y(I)=Z(I) THEN 1460
1420 PRINT X(I):"" / "":Y(I):"" = "":Z(I):"" IS WRONG"";
1430 PRINT "" - THE CORRECT ANSWER IS "":X(I)/Y(I)
1440 WRONG=WRONG+1
1450 PRINT
1460 REM
1470 REM
1480 NEXT
1490 '
1500 '-LET THEM REVIEW THE INCORRECT PROBLEMS - THEN CLEAR THE
SCREEN
1510 '
1520 INPUT ""HIT A RETURN FOR YOUR TIME"":A$
1530 PRINT CHR$(26)
1540 '
1550 '-POSITION THE CURSOR IN THE MIDDLE OF THE SCREEN
1560 '
1570 PRINT CHR$(27)""="":(CHR$(45))(CHR$(48)):
1580 '
1590 '-DISPLAY THE TIME AND NUMBER OF INCORRECT ANSWERS
1600 '
1610 PRINT ""IT TOOK YOU "":TIME:"" SECONDS WITH "":WRONG:""
WRONG""
1620 '
1630 '-POSITION THE CURSOR AT THE BOTTOM OF THE SCREEN
1640 '
1650 PRINT CHR$(27)""="":(CHR$(53))(CHR$(32))
1660 END
```

This program is used a lot around my house and the math scores are moving up.

The Executive starts to compute the elapsed time as soon as CP/M 3 is loaded. If the DATE program is not used the Executive will not have the correct time of day but will count elapsed time from boot up. I personally was not interested in the correct time of day just elapsed time. However, if you want to use the time of day, say to turn on appliances or burglar alarms, you will have to execute the DATE program (its on the CP/M 3 General Utilities Disk) as soon as you boot your system. This program will allow you to insert the correct date and time.

* * * * * * *

An "EXECUTIVE" Programming Tool

by David Whorf

This article describes a series of commands you may enter in a SUBMIT file using the Osborne Executive and CPM Plus. Unlike our brothers with the 01, we do not need to enter AUTOST.COM to boot up a program disk. CPM3 looks for a file called PROFILE.SUB each time it is cold booted. If it finds it, it will open it and follow the commands.

I have recently been working on a program whose main function is to print out large files in a given format. In order to debug the program, save reams of paper and find out what my variable are doing at any given time, I created the following disk, Special Function keys and PROFILE.SUB. I am working with MBASIC and using files that are 1000 bytes long. Before I worked the following system out, I used to use a ton of paper. Now all output goes to the monitor (CRT). I will assume that you have some form of data disk in Drive B:. In my case these data files vary from 1K to 142K in length.

On the disk you have in Dive A: place the following items:

DRIVE A:

Program	Disk Space
1. CP/M SYSTEM	18K
(Use COPYSYS to place on a empty formatted disk)	
2. MBASIC.COM	24K
3. DEVICE COM	8K
4. SUBMIT.COM	6K
5. PROFILE.SUB	1K
6. YOUR MBASIC PROGRAM	(up to 126K free space)
	57K

Double Density Disk = 183K - 57K = 126K

PROFILE.SUB can have many things on it. Create Profile.Sub by using the "N" option of WordStar. In my case I wanted to be able to stop a program in progress at certain points and read out my variables. This is what should be listed in the PROFILE.SUB.

NOTE: Enter at the top of the file, at the first entry line (with no lines in between) the following commands. Enter a return and the end of each line (No word wrap). AS YOU WILL NOTICE, SUB-COMMANDS WITHIN A FILE MUST BE PRECEDED WITH A "<"

PROFILE.SUB

COMMANDS	WHAT THEY DO
DEVICE	Activates the DEVICE.COM
<LST:=CRT	Sets the list device to the CRT
MBASIC /S:1000	Open MBasic and sets file length to 1000K
<LOAD ""B:YOURPROG.BAS	Loads the program you are working on
<937 STOP	Stops program at designated point
<1205 STOP	Same as above
<RUN	Starts your program running
<03/05/84	* Opening of the program called for date
<N	* Program queried if you wanted help

* Note: These last two commands were in response to the opening of the program called "YOURPROG"

The next step is to use the SETUP program and to enter the Special Function Keys with the following or similar commands:

Special Function Key	What it does
1. CONT<RET	To start the program again after the any STOP command
2. PRINT "Line Number=";LNUM%;" A$=";A$;" B%=";B%<RET>	Ask for any variable you want

Note: The information listed on SFK #2 may also be entered in the PROFILE.SUB, however it must be preceded with "<". <RET> is the symbol used by SETUP when a RETURN is entered.

Needless to say there are countless variations to this theme. It is wonderful to be able to insert the program disk in Drive A: and watch it cycle through the programs, start your own program with output to the CRT, see it halt and wait for your SFK command. This system is really helpful if you are interrupted many times and don't want to leave the program hanging there waiting for you. I hope this is of as much assistant and convenience to you as it has been to me. Debugging a program is a long and tedious process. This will help you along the way.

David Whorf is a member of San Francisco FOG, an Affiliated Member Organization. For information about their meeting times, see the ***CALENDAR*** in the center of this issue.

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Unused and unregistered package of dBASE II for the O-1 including documentation, registration form, ZIP and Tutorial Disks. $300 for the entire package. Direct inquiries to: Roger King, 1907 Pacific Manhattan Beach, CA 90266; (213)545-3760.

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dBASE II FOR SALE!

I have an unregistered, unopened package of dBASE II for an Osborne I. It is for sale and includes all documentation, registration forms, tutorial disks, and ZIP (a screen generator). The price is $325.00. Anyone interested should call me at (802) 773-7000 in Rutland, Vermont. Donald McLaughlin, DDS.

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THE BYTE COMPUTER SHOW

BYTE Magazine and The Interface Group have joined forces to present THE BYTE COMPUTER SHOW. The show will be September 6th through the 9th in San Francisco. They have invited FOG to set up a booth and we have accepted. If any members have some time available to help us staff the booth for the show, please contact the office at (415) 755-4140 as soon as possible.

An officer of any local group interested in getting discount tickets for their members should contact Michael Pesaturo at (800) 325-3330. The regular price for tickets will be $15.00 for all four days, $10.00 for one day. Group discounts will be $10.00 for four days, $7.50 for one. BYTE magazine subscribers get an even better deal — $7.50 for four days, $5.00 for one. The Show will take place at Brooks Hall. Doors open 10:00am each day. Show ends at 6:00pm Thursday, Friday, and Saturday. Sunday close is 5:00pm. As is common with shows of this type, there will be conferences in addition to the exhibit areas.

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FOG MEMBER MERCHANDISE

With the introduction of Media Master from DG/Systems, most members do not need the more expensive UNIFORM. While the two programs are similar in purpose, there are some important differences. Media Master will work on the Executive, UNIFORM will not. UNIFORM is $40.00 more expensive than Media Master.

If you are interested primarily in transferring data files from a non-CP/M 2.2 formatted disk, there is no difference in the method used by both programs. ONLY if you own a Morrow, KayPro, or double density Osborne 1 and want to edit a large volume of files on a disk formatted by another CP/M 2.2 system should you consider purchasing UNIFORM. This is because UNIFORM will allow your B: drive to emulate the drive of the other system. You can then use WordStar, NSWEEP, PIP, etc. on the foreign disk.

FOG will continue to carry UNIFORM because most dealers will not carry this software. You should order Media Master directly from DG/Systems.

SmartKey2 and SmartPrint2 are still available and we anticipate no difficulty in obtaining these. It appears that neither version of these programs will yet work on the Executive. Despite several tries, the programmer has not yet be successful in correcting the problems. If you have previously purchased these programs for your Executive, please return the complete package for a full refund.

SmartKey^2 is $89.95, SmartPrint^2 is $49.95. If you get both at the same time, the price is $129.95.

As noted previously, C.I. Software has made their program HexPrintR® available to the membership. The price is $39.00. This program works with WordStar to give you full control over your dot matrix printer..

In December, we reported the addition of the book on WordStar by Tony Bove and Cheryl Rhodes. This book is a must for anyone looking for assistance in using WordStar. The price of ***Pocket Guide to WordStar*** is $7.25.

One of the most popular items in the FOG inventory is the T-shirts with the FOG logo. These T-shirts are soft Osborne blue in color and are Hanes 100% cotton. They are cut large to allow for shrinkage. Sizes available are small (34-36), medium (38-40), large (42-44), and X-large (46-48). The price is $8.00 each (two for $15.00) for members and $10.00 each for non-members. Add $1.00 for shipping.

We also have available a set of two cassette tapes which are designed for the new Osborne user. Created for a 1.2 rev. model Osborne, the tapes will be very helpful if listening to a step-by-step procedure is an easier way for you (or the family) to learn. The tapes are equally useful for a 1.3 or 1.4 rev. Osborne as the only real change the that the FORMAT program is now a part of the COPY program. (On the 1.2 rev. these were two separate programs.) The set of tapes are $25.00

California members please add sales tax to the cost of any of these items. Overseas members should add first class airmail postage to the cost of any of the FOG merchandise.

Prices on the merchandise are as follows:

SmartKey2 only	$89.95
SmartPrint2 only	$49.95
SmartKey2/SmartPrint2	$129.95
CP/M Ext. Utility Pkg	$39.00
Unprotect	$29.00
UNIFORM	$69.95
HexPrintR	$39.00
SmartPrint1 only (remaining stock)	$35.00
T-shirts	$8.00
	2 for $15.00
WordStar Guide	$7.25
Cassette Tapes	$25.00
LIBRARY DIRECTORY	$5.00
6" X 4.5" fresnel screen enlarger	$19.95

To order any of these items, please send your payment to FOG, P. O. Box 3474, Daly City, CA, 94015-0474. Please include your membership-account number. If shipment cannot be made, your check will be returned. We cannot sell the manuals separately.

See page two of this (or any) issue for information on ordering back issues of the ***FOGHORN*** or copies of the disk library. You may combine payment for any of these items with the payment for back issues, library disks, or membership fees. Doing so will save the staff considerable time.

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The **F**irst **O**sborne **G**roup (**FOG**) has been formed as a User's Group for persons using or interested in portable computers and/or the CP/M disk operating system with related software. In June of 1984, there was nearly 12,000 members from around the world. Most attend meetings at over 300 locations.

Computer systems owned or used by members include the Osborne 1 (single and double density), the Osborne Executive, all models of the Morrow MicroDecision, the Zorba, all models of the KayPro, the Micromate, the Lobo Max, and many others. Special interest groups being organized to augment a network of local group meetings include dBASE II, ham radio, Personal Pearl, etc.

Dues in FOG are $24.00 per year. This entitles each member to a copy of the ***FOGHORN*** each month as well as access to the disk library and the RBBS-RCP/M. Local group meetings are open to the public without charge although access to the disk library is restricted to the membership. The FOG library contains only software copyrighted for the public domain. Piracy (the copying of proprietary software) is strongly condemned.

In the United States, the ***FOGHORN*** is normally mailed by non-profit bulk mail. (FOG is a corporation in the state of California and has obtained its non-profit, tax exempt status from both the state and federal governments.) For those who live out of the U.S., or those who prefer first class delivery of their ***FOGHORN***, additional postage must be added to the annual dues. See the chart on page 2 for details. Page 2 also contains most membership information.

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COMPUTER TYPE? ____________________

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Send this completed application **AND** your payment to:

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